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| Term                                | Documents |
|-------------------------------------|-----------|
| 1.CLM..USPT,PGPB,JPAB,EPAB,DWPI.    | 13        |
| (L1.CLM.).USPT,PGPB,JPAB,EPAB,DWPI. | 13        |

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**Database:** IBM Technical Disclosure Bulletins**Search:** **Search History****DATE: Saturday, August 03, 2002** [Printable Copy](#) [Create Case](#)**Set Name Query**  
side by side**Hit Count Set Name**  
result set*DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ*L2 L1.clm. 13 L2L1 (cd28) same (inhibit\$ or block\$ or prevent\$ or treat\$ or therap\$) same ('t-cell\$' or 't-lymphocyte' or b7\$) 323 L1

END OF SEARCH HISTORY

b 410  
03aug02 07:36:49 User208760 Session D2119.1  
\$0.32 0.092 DialUnits File1  
\$0.32 Estimated cost File1  
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File 410:Chronolog(R) 1981-2002/Jul  
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\$0.35 Estimated total session cost 0.161 DialUnits

SYSTEM:OS - DIALOG OneSearch

File 5:Biosis Previews(R) 1969-2002/Jul W4  
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\*File 5: Alert feature enhanced for multiple files, duplicates removal, customized scheduling. See HELP ALERT.

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Set Items Description  
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? e au=linsley peter ?

Ref Items Index-term  
E1 156 AU=LINSLEY P.S.  
E2 33 AU=LINSLEY PETER  
E3 0 \*AU=LINSLEY PETER ?  
E4 139 AU=LINSLEY PETER S  
E5 1 AU=LINSLEY R F  
E6 2 AU=LINSLEY R K  
E7 18 AU=LINSLEY R M  
E8 1 AU=LINSLEY R.F.  
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E10 1 AU=LINSLEY W  
E11 3 AU=LINSLEY W S  
E12 1 AU=LINSLEY W.S.

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? s e1-e4

156 AU=LINSLEY P.S.  
33 AU=LINSLEY PETER  
0 AU=LINSLEY PETER ?  
139 AU=LINSLEY PETER S

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S1      328  E1-E4
? s s1 and b7?
      328  S1
20254  B7?
S2      188  S1 AND B7?
? rd s2
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...examined 50 records (100)
...examined 50 records (150)
...completed examining records
S3      123  RD S2 (unique items)
? s b7?
S4      20254  B7?
? s b7?(20n) (t-cell? or t-lymphocyt? or cd28 or ctla?)
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GENE (HOMINIDA
      20254  B7?
      37395  T-CELL?
149088  T-LYMPHOCYT?
      13272  CD28
      5827  CTLA?
S5      4111  B7?(20N) (T-CELL? OR T-LYMPHOCYT? OR CD28 OR CTLA?)
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Processing
      4111  S5
      30482428  PY<1992
S6      53  S5 AND PY<1992
? rd s6
...examined 50 records (50)
...completed examining records
S7      27  RD S6 (unique items)
? t s7/7/all

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7/7/1 (Item 1 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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07906307 BIOSIS NO.: 000093005430  
CD28 DELIVERS A COSTIMULATORY SIGNAL INVOLVED IN ANTIGEN-SPECIFIC IL-2  
PRODUCTION BY HUMAN T CELLS  
AUTHOR: JENKINS M K; TAYLOR P S; NORTON S D; URDAHL K B  
AUTHOR ADDRESS: DEP. MICROBIOLOGY, UNIVERSITY MINNESOTA MEDICAL SCHOOL, BOX  
196 UMHC, 420 DELAWARE ST. S.E., MINNEAPOLIS, MINN. 55455.  
JOURNAL: J IMMUNOL 147 (8). 1991. 2461-2466. 1991  
FULL JOURNAL NAME: Journal of Immunology  
CODEN: JOIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

ABSTRACT: CD4+ T cells require two signals to produce maximal amounts of IL-2, i.e., TCR occupancy and an unidentified APC-derived costimulus. Here we show that this costimulatory signal can be delivered by the T cell molecule CD28. An agonistic anti-CD28 mAb, but not IL-1 and/or IL-6, stimulated T cell proliferation by tetanus toxoid-specific T cells cultured with Ag-pulsed, costimulation-deficient APC. Furthermore, the ability of B cell tumor lines to provide costimulatory signals to purified T cells correlated well with expression of the **CD28** ligand **B7/BB-1**. Finally, like anti-**CD28** mAb, autologous huan APC appeared to stimulate a cyclosporine A-resistant pathway of T cells activation. Togehter, these results suggest that the two signals required for IL-2 production by CD4+ T celsl can be transduced by the TCR and

CD28.

7/7/2 (Item 2 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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07900302 BIOSIS NO.: 000041129146  
**LIGATION OF THE CD28 RECEPTOR BY ANTIBODY AND B7-BB1 INDUCES TYROSINE PHOSPHORYLATION IN HUMAN T CELLS**  
AUTHOR: VANDENBERGHE P; FLETCHER M C; LEDBETTER J A; NADLER L M; FREEMAN G J; TURKA L A; THOMPSON C B; JUNE C H  
AUTHOR ADDRESS: NAVAL MED. RES. INST., BETHESDA, MD. 20889.  
JOURNAL: TWENTY-EIGHTH NATIONAL MEETING OF THE SOCIETY FOR LEUKOCYTE BIOLOGY AND THE TWENTY-FIRST LEUKOCYTE CULTURE CONFERENCE, ASPEN, COLORADO, USA, SEPTEMBER 28-OCTOBER 1, 1991. J LEUKOCYTE BIOL 0 (SUPPL. 2). 1991. 23. 1991  
CODEN: JLBIE  
DOCUMENT TYPE: Meeting  
RECORD TYPE: Citation  
LANGUAGE: ENGLISH

7/7/3 (Item 3 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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07865475 BIOSIS NO.: 000092124841  
**SELECTIVE INDUCTION OF B7-BB-1 ON INTERFERON-GAMMA STIMULATED MONOCYTES A POTENTIAL MECHANISM FOR AMPLIFICATION OF T CELL ACTIVATION THROUGH THE CD28 PATHWAY**  
AUTHOR: FREEDMAN A S; FREEMAN G J; RHYNHART K; NADLER L M  
AUTHOR ADDRESS: DEP. MEDICINE, HARVARD MEDICAL SCHOOL, CAMBRIDGE, MASS.  
JOURNAL: CELL IMMUNOL 137 (2). 1991. 429-437. 1991  
FULL JOURNAL NAME: Cellular Immunology  
CODEN: CLIMB  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

**ABSTRACT:** The B cell activation antigen B7/BB-1 is the natural ligand for the T cell antigen CD28 and these two molecules are capable of mediating T-B cell adhesion. Engagement of the CD28 pathway provides a costimulatory signal to T cells leading to enhanced lymphocyte production. We report that interferon-.gamma. (INF-.gamma.) induces the expression of B7/BB-1 on monocytes. This induction was very specific since other cytokines and stimuli which activate monocytes including M-CSF, GM-CSL, IL3, TNF-.alpha., and LPS were unable to induce B7/BB-1. Following culture of monocytes with INF-.gamma., maximal mRNA and cell surface B7/BB-1 expression was detected at 12 and 24 hr, respectively. In addition to antigen presentation, optimal T cell activation and lymphokine synthesis require an additional cell to cell contact signal provided by the antigen presenting cell. The induction of B7/BB-1 on monocytes and subsequent heterophilic interaction of B7/BB-1 with CD28 may provide a mechanism for the amplification of T cell proliferation and lymphokine production by INF-.gamma. activated monocytes.

7/7/4 (Item 4 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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07842496 BIOSIS NO.: 000092112662  
**CTLA-4 IS A SECOND RECEPTOR FOR THE B CELL ACTIVATION ANTIGEN**

B7

AUTHOR: LINSLEY P S; BRADY W; URNES M; GROSMAIRE L S; DAMLE N K; LEDBETTER J A

AUTHOR ADDRESS: ONCOGEN DIVISION, BRISTOL-MYERS SQUIBB RES. INST., 3005 FIRST AVENUE, SEATTLE, WASHINGTON 98121.

JOURNAL: J EXP MED 174 (3). 1991. 561-570. 1991

FULL JOURNAL NAME: Journal of Experimental Medicine

CODEN: JEMEA

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

ABSTRACT: Functional interactions between T and B lymphocytes are necessary for optimal activation of an immune response. Recently, the T lymphocyte receptor CD28 was shown to bind the B7 counter-receptor on activated B lymphocytes, and subsequently to costimulate interleukin 2 production and T cell proliferation. CTLA-4 is a predicted membrane receptor from cytotoxic T cells that is homologous to CD28 and whose gene maps to the same chromosomal band as the gene for CD28. It is not known, however, if CD28 and CTLA-4 also share functional properties. To investigate functional properties of CTLA-4, we have produced a soluble genetic fusion between the extracellular domain of CTLA-4 and an immunoglobulin C gamma chain. Here, we show that the fusion protein encoded by this construct, CTLA4Ig, bound specifically to B7-transfected Chinese hamster ovary cells and to lymphoblastoid cells. CTLA4Ig also immunoprecipitated B7 from cells surface 125I-labeled extracts of these cells. The avidity of 125I-labeled B7Ig fusion protein for immobilized CTLA4Ig was estimated (Kd appr. 12 nM). Finally, we show that CTLA4Ig was a potent inhibitor of in vitro immune responses dependent upon cellular interactions between T and B lymphocytes. These findings provide direct evidence that, like its structural homologue CD28, CTLA-4 is able to bind the B7 counter-receptor on activated B cells. Lymphocyte interactions involving the B7 counter-receptor are functionally important for alloantigen responses in vitro.

7/7/5 (Item 5 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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07842389 BIOSIS NO.: 000092112555

STRUCTURE EXPRESSION AND T CELL COSTIMULATORY ACTIVITY OF THE MURINE HOMOLOGUE OF THE HUMAN B LYMPHOCYTE ACTIVATION ANTIGEN B7

AUTHOR: FREEMAN G J; GRAY G S; GIMMI C D; LOMBARD D B; ZHOU L-J; WHITE M; FINGEROTH J D; GRIBBEN J G; NADLER L M

AUTHOR ADDRESS: DIVISION TUMOR IMMUNOLOGY, DANA-FARBER CANCER INST., MAYER 726, 44 BINNEY STREET, BOSTON, MASS. 02115.

JOURNAL: J EXP MED 174 (3). 1991. 625-632. 1991

FULL JOURNAL NAME: Journal of Experimental Medicine

CODEN: JEMEA

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

ABSTRACT: Following occupancy of the T cell receptor by antigen, T cell proliferation and lymphokine production are determined by a second costimulatory signal delivered by a ligand expressed on antigen presenting cells. The human B cell activation antigen B7, which is expressed on antigen presenting cells including activated B cells and gamma interferon treated monocytes, has been shown to deliver such a costimulatory signal upon attachment to its ligand on T cells, CD28. We have cloned and sequenced the murine homologue of the human B7 gene. The predicted murine protein has 44% amino acid identity with human B7. The greatest similarity is in the Ig-V and Ig-C like domains. Murine B7 mRNA was detected in murine hematopoietic cells of B cell but not T

cell origin. Cells transfected with murine **B7** provided a costimulatory signal to human CD28+ T lymphocytes. These results demonstrate the costimulatory activity of murine **B7** and provide evidence that the ligand attachment site is conserved between the two species.

7/7/6 (Item 6 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07795565 BIOSIS NO.: 000092088136  
**B-CELL SURFACE ANTIGEN B7 PROVIDES A COSTIMULATORY SIGNAL THAT INDUCES T CELLS TO PROLIFERATE AND SECRETE INTERLEUKIN 2**  
AUTHOR: GIMMI C D; FREEMAN G J; GRIBBEN J G; SUGITA K; FREEDMAN A S; MORIMOTO C; NADLER L M  
AUTHOR ADDRESS: DIV. TUMOR IMMUNOL., DANA-FARBER CANCER INST., MAYER 730, 44 BINNEY ST., BOSTON, MASS. 02115.  
JOURNAL: PROC NATL ACAD SCI U S A 88 (15). 1991. 6575-6579. 1991  
FULL JOURNAL NAME: Proceedings of the National Academy of Sciences of the United States of America  
CODEN: PNASA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

**ABSTRACT:** Occupancy of the T-cell receptor complex does not appear to be a sufficient stimulus to induce a T-cell-mediated immune response. Increasing evidence suggests that cognate cell-cell interaction between an activated T cell and an antigen-presenting cell may provide such a stimulus. A candidate T-cell surface molecule for this costimulatory signal is the T-cell-restricted CD28 antigen. Following crosslinking with anti-CD28 mAb, suboptimally stimulated CD28+ T cells show increased proliferation and markedly increased secretion of a subset of lymphokines. Recently, the B-cell surface activation antigen **B7** was shown to be a natural ligand for the CD28 molecule, and both **B7** and CD28 are members of the immunoglobulin superfamily. Here we report that **B7**-transfected CHO cells can induce suboptimally activated CD28+ T cells to proliferate and secrete high levels of interleukin 2. The response is identical whether T cells are submitogenically stimulated with either phorbol myristate acetate or anti-CD3 to activate the T cells. This response is specific and can be totally abrogated with anti-**B7** monoclonal antibody. As has previously been observed for anti-CD28 monoclonal antibody, **B7** ligation induced secretion of interleukin 2 but not interleukin 4. We have previously demonstrated that **B7** expression is restricted to activated B lymphocytes and interferon .gamma.-activated monocytes. Since these two cellular populations are involved in antigen presentation as well as cognate interaction with T lymphocytes, **B7** is likely to represent a central costimulatory signal that is capable of amplifying an immune response.

7/7/7 (Item 7 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07678138 BIOSIS NO.: 000092025059  
**DIRECT HELPER T CELL-INDUCED B CELL DIFFERENTIATION INVOLVES INTERACTION BETWEEN T CELL ANTIGEN CD28 AND B CELL ACTIVATION ANTIGEN B7**  
AUTHOR: DAMLE N D; LINSLEY P S; LEDBETTER J A  
AUTHOR ADDRESS: ONCOGEN DIV., BRISTOL-MYERS SQUIBB PHARMACEUTICAL RES. INST., 3005 FIRST AVE., SEATTLE, WASH. 98121, USA.  
JOURNAL: EUR J IMMUNOL 21 (5). 1991. 1277-1282. 1991  
FULL JOURNAL NAME: European Journal of Immunology

CODEN: EJIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

**ABSTRACT:** Cognate interactions between major histocompatibility complex class II antigen (Ag)-reactive CD4+ T helper (Th) and Ag-presenting B cells induce first the activation of B cells and their subsequent differentiation into Ig-secreting cells (ISC). The Th cell-associated homodimeric glycoprotein **CD28** has been implicated as an important regulator of Th activation. Recently, B cell-associated early activation Ag **B7** has been identified as a ligand for the **CD28** molecule. In this study, we have examined using monoclonal antibodies (mAb) the roles of **CD28** and **B7** molecules during the Th-B cell cognate interactions leading to the differentiation of **B7+** B cells. Anti-**CD28** mAb 9.3 specifically inhibited proliferative responses of CD4+ T cells to both allogeneic B cells and soluble Ag-presenting autologous non-T cells. In addition, anti-**CD28** mAb 9.3 inhibited Th-induced differentiation of alloantigen-presenting B cells into ISC. Similar inhibition of both Ag-induced Th activation and B cell differentiation into ISC was observed using mAb BB1 which recognizes a B cell-associated molecule **B7**. In contrast, non-cognate Th-independent exogenous interleukin 6-induced differentiation of **B7+** B cells into ISC was not inhibited by mAb to either molecule. These results clearly demonstrate the involvement of **CD28** on Th and its ligand **B7** on B cells during cognate Th-B interactions leading to the differentiation of B cells. Furthermore, these results also suggest the development of new mAb-based therapeutic approaches for exaggerated B cell activation associated with certain autoimmune diseases such as systemic lupus erythematosus.

7/7/8 (Item 8 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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07634930 BIOSIS NO.: 000092004874  
**IL-4 AND IL-2 UPREGULATE THE EXPRESSION OF ANTIGEN B7 THE B CELL COUNTERSTRUCTURE TO T CELL CD28 AN AMPLIFICATION MECHANISM FOR T CELL-B CELL INTERACTIONS**

AUTHOR: VALLE A; AUBRY J-P; DURAND I; BANCHEREAU J  
AUTHOR ADDRESS: SCHERING-PLOUGH, LAB. IMMUNOLOGICAL RES., 27 CHEMIN DES PEUPLIERS, BP 11, 69570 DARDILLY, FRANCE.  
JOURNAL: INT IMMUNOL 3 (3). 1991. 229-236. 1991  
CODEN: INIME  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

**ABSTRACT:** We recently generated mAb 104 which is specific for the B cell activation antigen Ag **B7**. With this we studied the regulation of Ag **B7** expression on normal tonsillar B lymphocytes as well as the activities of **B7+** and **B7-** activated B cells. SAC and to a lesser extent anti-IgM antibody upregulated Ag **B7** and this was further enhanced by IL-2 and most notably IL-4. Ag **B7** was expressed on virtually all sIgG+ and sIgA+ B cells and approximately half of the sIgD+ and sIgM+ B cells. SAC-stimulated **B7+** cells proliferated and produced IgM, IgG and IgA in response to IL-2 and IgM and IgG in response to IL-2 and IL-4. Considering that Ag **B7** has recently been shown to be the counterstructure of the T cell **CD28** and that **CD28** triggering strongly enhance cytokine production by T cells, it is likely that the **CD28/B7** interaction represents an important amplification phenomenon in T-B cell interaction leading to humoral immune responses. The preferential expression of Ag **B7** on IgG and IgA committed cells suggests that **CD28/B7** interaction may be more specific to secondary antibody responses provided by memory T and B cells.

7/7/9 (Item 9 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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07627948 BIOSIS NO.: 000040128157  
**CD28** BINDING AND T CELL COSTIMULATORY ACTIVITY OF THE B CELL  
ACTIVATION ANTIGEN **B7**  
AUTHOR: LINSLEY P S; BRADY W A; DAMLE N K; LEDBETTER J A  
AUTHOR ADDRESS: ONCOGEN, BRISTOL-MYERS-SQUIBB PHARM. RES. INST., 3005 FIRST  
AVE., SEATTLE, WA 98121.  
JOURNAL: 75TH ANNUAL MEETING OF THE FEDERATION OF AMERICAN SOCIETIES FOR  
EXPERIMENTAL BIOLOGY, ATLANTA, GEORGIA, USA, APRIL 21-25, 1991. FASEB (FED  
AM SOC EXP BIOL) J 5 (4). 1991. A617. 1991  
CODEN: FAJOE  
DOCUMENT TYPE: Meeting  
RECORD TYPE: Citation  
LANGUAGE: ENGLISH

7/7/10 (Item 10 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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07544244 BIOSIS NO.: 000091096322  
**THE CD28 LIGAND B7-BB1 PROVIDES COSTIMULATORY SIGNAL FOR  
ALLOACTIVATION OF CD4-POSITIVE T CELLS**  
AUTHOR: KOULOVA L; CLARK E A; SHU G; DUPONT B  
AUTHOR ADDRESS: IMMUNOGENETICS LAB., BOX 41, MEMORIAL SLOAN-KETTERING  
CANCER CENT., 1275 YORK AVENUE, NEW YORK, N.Y. 10021.  
JOURNAL: J EXP MED 173 (3). 1991. 759-762. 1991  
FULL JOURNAL NAME: Journal of Experimental Medicine  
CODEN: JEMEA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

ABSTRACT: Activation via the T lymphocyte cell surface molecular **CD28** provides a potent amplification signal for interleukin 2 (IL-2) production in several *in vitro* systems. The B lymphocyte activation antigen, **B7/BB1**, is a natural ligand for **CD28**. Here was investigate the role of **CD28** and **B7/BB1** in primary activation of CD4+ T lymphocytes stimulated with allogeneic B lymphoblastoid cell lines. A subset of peripheral CD4+ T cells that is unresponsive to crosslinking of CD3/T cell receptor (TCR) with CD3 monoclonal antibody (mAb) does proliferate in response to allogeneic B lymphoblasts. TCR binding to allogeneic major histocompatibility complex antigens was an absolute requirement for activation of these cells because mAbs to either CD3 or human histocompatibility leukocyte antigen (HLA) class II completely inhibited activation. **CD28** and **B7/BB1** antibodies inhibited T cell proliferation 90% and 84%, respectively. Similar results were obtained with the total CD4+ T lymphocyte population. Crosslinking of HLA-DR antigens on small, resting B cells induced rapid expression of **B7/BB1**, which peaked at 6 h and returned to baseline levels within 18 h. These data demonstrate that **CD 28-B7/BB1** binding provides an important early second signal for alloactivation of CD4+ T lymphocyte by B lymphoblasts. The results also suggest that T cells interacting with allogeneic resting B cells may induced **B7/BB1** expression in the alloantigen-presenting cell as a consequence of interaction between the TCR and class II molecules.

7/7/11 (Item 11 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)

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07544016 BIOSIS NO.: 000091096094

BINDING OF THE B CELL ACTIVATION ANTIGEN B7 TO CD28

COSTIMULATES T CELL PROLIFERATION AND INTERLEUKIN 2 MESSENGER RNA  
ACCUMULATION

AUTHOR: LINSLEY P S; BRADY W; GROSMAIRE L; ARUFFO A; DAMLE N K; LEDBETTER J  
A

AUTHOR ADDRESS: ONCOGEN DIV., BRISTOL-MYERS-SQUIBB PHARMACEUTICAL RES.

INST., 3005 FIRST AVENUE, SEATTLE, WASH. 98121.

JOURNAL: J EXP MED 173 (3). 1991. 721-730. 1991

FULL JOURNAL NAME: Journal of Experimental Medicine

CODEN: JEMEA

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

**ABSTRACT:** A successful immune response requires intercellular contact between T and B lymphocytes. We recently showed that CD28, a T cell surface protein that regulates an activation pathway, could mediate intercellular adhesion with activated B cells by interaction with the B7 antigen. Here we show that CD28 is the primary receptor for B7 on activated peripheral blood T cells, that CD28 binds to B7 in the absence of other accessory molecules, and that interaction between CD28 and B7 is costimulatory for T cell activation. To characterize the binding of CD28 to B7, we have produced genetic fusions of the extracellular portions of B7 and CD28, and immunoglobulin (Ig) C.gamma.1 chains. 125I-labeled B7 Ig bound to CD28-transfected Chinese hamster ovary (CHO) cells, and to immobilized CD28 Ig with a Kd .apprx. 200 nM. B7 Ig also inhibited CD28-mediated cellular adhesion. The function of CD28-B7 interactions during T cell activation was investigated with soluble fusion proteins and with B7-transfected CHO cells. Immobilized B7 Ig and B7+ CHO cells costimulated T cell proliferation. Stimulation of T cells with B7+ CHO cells also specifically increased levels of interleukin 2 transcripts. These results demonstrate that the CD28 signaling pathway could be activated by B7, resulting in increased T cell cytokine production and T cell proliferation. Cellular interactions mediated by B7 and CD28 may represent an important component of the functional interactions between T and B lymphoid cells.

7/7/12 (Item 12 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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07295839 BIOSIS NO.: 000090075726

T CELL ANTIGEN CD28 MEDIATES ADHESION WITH B CELLS BY INTERACTING  
WITH ACTIVATION ANTIGEN B7-BB-1

AUTHOR: LINSLEY P S; CLARK E A; LEDBETTER J A

AUTHOR ADDRESS: ONCOGEN, 3005 FIRST AVE., WASHINGTON 98121.

JOURNAL: PROC NATL ACAD SCI U S A 87 (13). 1990. 5031-5035. 1990

FULL JOURNAL NAME: Proceedings of the National Academy of Sciences of the  
United States of America

CODEN: PNASA

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

**ABSTRACT:** Studies using monoclonal antibodies (mAbs) have implicated the homodimeric glycoprotein CD28 as an important regulator of human T-cell activation, in part by posttranscriptional control of cytokine mRNA levels. Although the CD28 antigen has functional and structural characteristics of a receptor, a natural ligand for this molecule has not been identified. Here we show that the CD28 antigen, expressed in Chinese

hamster ovary (CHO) cells, mediated specific intercellular adhesion with human lymphoblastoid and leukemic B cell lines and with activated primary murine B cells. CD28-mediated adhesion was not dependent upon divalent cations. Several mAbs were identified that inhibited CD28-mediated adhesion, including mAbs BB-1 against the B-cell activation antigen B7/BB-1 in some mAbs against major histocompatibility complex class I antigens. B7/BB-1 expression correlated closely with CD28-mediated adhesion, but class I expression did not. Transfected COS cells expressing the B7/BB-1 antigen adhered to CD28+ CHO cells; this adhesion was blocked by mAbs to CD28 and B7/BB-1. The specific recognition by CD28 of the B-cell activation antigen B7/BB-1 represents a heterophilic interaction between members of the immunoglobulin superfamily that may serve to regulate T-cell cytokine levels at sites of B-cell activation.

7/7/13 (Item 1 from file: 73)  
DIALOG(R) File 73:EMBASE  
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04710463 EMBASE No: 1991203817  
Regulation of human B-cell activation and adhesion  
Clark E.A.; Lane P.J.L.  
Department of Microbiology, Regional Primate Research Ctr, University of Washington, Seattle, WA 98195 United States  
Annual Review of Immunology ( ANNU. REV. IMMUNOL. ) (United States) 1991  
9/- (97-127)  
CODEN: ARIMD ISSN: 0301-3782  
DOCUMENT TYPE: Journal; Review  
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Human B lymphocyte differentiation is regulated by signals transmitted after binding of cytokines to their specific receptors and/or cross-linking of cell-cell adhesion receptors. In addition to surface immunoglobulin (sIg) receptors for antigen, a number of B cell-associated surface molecules have now been identified which may regulate activation and adhesion of B cells. These include members of the Ig supergene family such as CD19, CD22, B7/BB1, and BMC1, cell surface enzymes such as CD10, CD73, and CDw75, and proteins with multiple transmembrane domains such as CD20 and CD37. In this review we describe how several of these accessory molecules may affect signaling via antigen receptors and influence primary vs secondary immune responses. For instance, signaling via either CD21 or CD22 can augment responses to anti-Ig; the B cell activation marker B7/BB1 may function to trigger T cells via its ligand, CD28, to produce cytokines which in turn stimulate B cells; and the receptor, CD40 may transmit a signal to protect germinal center B cells from undergoing programmed cell death. Understanding how B cell accessory molecules regulate key interconnections during development may provide insights into the control and management of diseases with B-cell dysfunctions.

7/7/14 (Item 2 from file: 73)  
DIALOG(R) File 73:EMBASE  
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04643088 EMBASE No: 1991137131  
IL-4 and IL-2 upregulate the expression of antigen B7, the B cell counterstructure to T cell CD28: An amplification mechanism for T-B cell interactions  
Valle A.; Aubry J.-P.; Durand I.; Banchereau J.  
Schering-Plough, Laboratory for Immunological, Research, 27 Chemin des Peupliers, 69570 Dardilly France  
International Immunology ( INT. IMMUNOL. ) (United Kingdom) 1991, 3/3 (229-235)

CODEN: INIME ISSN: 0953-8178  
DOCUMENT TYPE: Journal; Article  
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

We recently generated mAb 104 which is specific for the B cell activation antigen Ag B7. With this we studied the regulation of Ag B7 expression on normal tonsillar B lymphocytes as well as the activities of B7<sup>sup +</sup> and B7<sup>sup -</sup> activated B cells. SAC and to a lesser extent anti-IgM antibody upregulated Ag B7 and this was further enhanced by IL-2 and most notably IL-4. Ag B7 was expressed on virtually all slgG<sup>sup +</sup> and slgA<sup>sup +</sup> B cells and approximately half of the slgD<sup>sup +</sup> and slgM<sup>sup +</sup> B cells. SAC-stimulated B7<sup>sup +</sup> B cells proliferated and produced IgM, IgG and IgA in response to IL-2 and IgM and IgG in response to IL-4. SAC-stimulated B7<sup>sup -</sup> B cells proliferated and produced only IgM in response to IL-2 and IL-4. Considering that Ag B7 has recently been shown to be the counterstructure of the T cell CD28 and that CD28 triggering strongly enhances cytokine production by T cells, it is likely that the CD28/B7 interaction represents an important amplification phenomenon in T-B cell interaction leading to humoral immune responses. The preferential expression of Ag B7 on IgG and IgA committed cells suggests that CD28/B7 interaction may be more specific to secondary antibody responses provided by memory T and B cells.

7/7/15 (Item 3 from file: 73)  
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04618099 EMBASE No: 1991112142  
The CD28 ligand B7/BB1 provides costimulatory signal for alloactivation of CD4<sup>sup +</sup> T cells  
Koulova L.; Clark E.A.; Shu G.; Dupont B.  
Human Immunogenetics Lab., Memorial Sloan-Kettering, Cancer Center, 1275 York Avenue, New York, NY 10021 United States  
Journal of Experimental Medicine ( J. EXP. MED. ) (United States) 1991, 173/3 (759-762)  
CODEN: JEMEA ISSN: 0022-1007  
DOCUMENT TYPE: Journal; Article  
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Activation via the T lymphocyte cell surface molecule CD28 provides a potent amplification signal for interleukin 2 (IL-2) production in several *in vitro* systems. The B lymphocyte activation antigen, B7/BB1, is a natural ligand for CD28. Here we investigate the role of CD28 and B7/BB1 in primary activation of CD4<sup>sup +</sup> T lymphocytes stimulated with allogeneic B lymphoblastoid cell lines. A subset of peripheral CD4<sup>sup +</sup> T cells that is unresponsive to crosslinking of CD3/T cell receptor (TCR) with CD3 monoclonal antibody (mAb) does proliferate in response to allogeneic B lymphoblasts. TCR binding to allogeneic major histocompatibility complex antigens was an absolute requirement for activation of these cells because mAbs to either CD3 or human histocompatibility leukocyte antigen (HLA) class II completely inhibited activation. CD28 and B7/BB1 antibodies inhibited T cell proliferation 90% and 84%, respectively. Similar results were obtained with the total CD4<sup>sup +</sup> T lymphocyte population. Crosslinking of HLA-DR antigens on small, resting B cells induced rapid expression of B7/BB1, which peaked at 6 h and returned to baseline levels within 18 h. These data demonstrate that CD28-B7/BB1 binding provides an important early second signal for alloactivation of CD4<sup>sup +</sup> T lymphocyte by B lymphoblasts. The results also suggest that T cells interacting with allogeneic resting B cells may induce B7/BB1 expression in the alloantigen-presenting cell as a consequence of interaction between the TCR and class II molecules.

7/7/16 (Item 4 from file: 73)  
DIALOG(R) File 73:EMBASE  
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04306025 EMBASE No: 1990188581  
Role of the CD28 receptor in T-cell activation  
June C.H.; Ledbetter J.A.; Linsley P.S.; Thompson C.B.  
Naval Medical Research Institute, Bethesda, MD 20814 United States  
Immunology Today ( IMMUNOL. TODAY ) (United Kingdom) 1990, 11/6  
(211-216)  
CODEN: IMTOD ISSN: 0167-4919  
DOCUMENT TYPE: Journal; Review  
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Antigen-specific T-cell activation is initiated through the T-cell receptor. Recent evidence has shown that a number of additional T-cell surface receptors serve to regulate the responses of antigen-activated T cells. One such molecule, **CD28**, is a member of a heterophilic cell adhesion complex, and is the receptor for the B-cell-restricted **B7** /BB-1 antigen. As Carl June, Jeffrey Ledbetter, Peter Linsley and Craig Thompson review here, **CD28** serves as the surface component of a novel signal transduction pathway that modulates T-cell responses to various immunosuppressive agents.

7/7/17 (Item 1 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

06889958 91196107 PMID: 2014539  
Inhibition of anti-HLA-B7 alloreactive CTL by affinity-purified soluble HLA.  
Zavazava N; Hausmann R; Muller-Ruchholtz W  
Department of Immunology, University of Kiel, Federal Republic of Germany.  
Transplantation (UNITED STATES) Apr 1991, 51 (4) p838-42,  
ISSN 0041-1337 Journal Code: 0132144  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: Completed  
The objective of this study was to elucidate the interaction of naturally occurring soluble MHC class I molecules with alloreactive CTL and to discuss its possible relevance to graft acceptance. An anti-HLA-B7 specific CTL-line, BV.B7, was generated in vitro. On phenotyping the cells after 6 weeks, 80% were found to be CD8+, 14% CD4+ and 6% CD8+CD4+. CD4+ CTL were depleted using immunomagnetic beads precoated with an anti-CD4 antibody. Of the recovered CTL greater than 96% were CD8+. A total of 12 HLA-B7 target cell lines and PHA blasts tested were specifically lysed in a 51Cr-release assay. Soluble HLA class I molecules were isolated on affinity chromatography columns using the anti-HLA-B7 ME 1 and the anti-heavy chain W6/32 monoclonal antibodies. Antigen purity was confirmed by analysis on SDS-PAGE gels. CTL were preincubated with 0.1-1.8 micrograms/ml soluble HLA for 30 min at 37 degrees C and subsequently tested for cytotoxicity in the 51Cr-release assay; 1.1 micrograms/ml HLA-B7 molecules reduced CTL cytotoxicity by 50% whereas non-B7 HLA had no effect. Further, CTL cytotoxicity was reduced by preincubation with anti-CD8, anti-TcR, and anti-CD3 antibodies. We anticipate a possible down-regulatory role of soluble HLA on CTL in allogeneic transplantation.

Record Date Created: 19910513

7/7/18 (Item 2 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

06344073 90038461 PMID: 2478616

Analysis of the HLA-Cw3-specific cytotoxic T lymphocyte response of HLA-B7 X human beta 2m double transgenic mice.

Barra C; Perarnau B; Gerlinger P; Lemeur M; Gillet A; Gibier P; Lemonnier F A

Centre d'Immunologie INSERM-CNRS de Marseille-Luminy, France.

Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Nov 15 1989, 143 (10) p3117-24, ISSN 0022-1767 Journal Code: 2985117R

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

The cytolytic responses of either normal (non transgenic), HLA-B7 (single transgenic) or HLA-B7 x human beta 2 microglobulin (double transgenic) DBA/2 mice induced by transfected HLA-Cw3 P815 (H-2d) mouse mastocytoma cells were compared, to evaluate whether the expression of an HLA class I molecule in responder mice would favor the emergence of HLA-specific, H-2-unrestricted CTL. Only 8 of 300 HLA-Cw3-specific CTL clones tested could selectively lyse HLA-Cw3-transfected cells in an H-2-unrestricted manner, all having been isolated after hyperimmunization of double transgenic mice. These clones also lysed HLA-Cw3+ human cells. Unexpectedly, the lysis of the human but not that of the murine HLA-Cw3 cells was inhibited by Ly-2,3-specific mAb. Despite significant expression of HLA-B7 class I molecules on transgenic lymphoid cells, including thymic cells, limiting dilution analysis and comparative study of TCR-alpha and -beta gene rearrangements of the eight isolated clones (which suggested that they all derived from the same CTL precursor) indicated that the frequency of HLA-Cw3-specific H-2 unrestricted cytotoxic T lymphocytes remained low (even in HLA-B7 x human beta 2-microglobulin double transgenic mice). This suggests that coexpression of HLA class I H and L chain in transgenic mice is not the only requirement for significant positive selection of HLA class I-restricted cytotoxic mouse T lymphocytes.

Record Date Created: 19891215

7/7/19 (Item 3 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

06293460 89381392 PMID: 2476507

Delineation of determinants on HLA-B7 and HLA-B27 that are necessary for cytolytic T cell recognition by using inter- and intra-domain recombinants.

Healy F; Toubert A; Gomard E; Jordan B R; Levy J P  
INSERM U 152, CNRS UA 628, Hopital Cochin, Paris, France.

Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Oct 1 1989, 143 (7) p2357-63, ISSN 0022-1767 Journal Code: 2985117R

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

We have used bulk culture HLA-B7 and HLA-B27 specific CTL lines derived from 11 donors, and a series of rHLA-B7/HLA-B27 genes transfected into and expressed on the surface of the murine cell P815, to determine the amino acid residues on these HLA class I molecules that are critical for allospecific CTL recognition. The results obtained indicate that for four of six HLA-B7-specific CTL lines the alpha-1 domain for CTL recognition. Furthermore, we found that residues 77 and/or 80 had a critical effect on recognition for all of the CTL lines tested. The region 97-156 in the alpha-2 domain was also important for some of these CTL lines. Furthermore, by using five bulk culture HLA-B27-specific CTL lines we were able to show that residues 77 and/or 80 and residue 152 are also essential for recognition of HLA-B27 by HLA-B27-specific CTL. The strong influence exerted by these residues is discussed in terms of the three-dimensional structure of class I molecules. Finally, a selection was regularly observed

in the bulk cultures such that the CTL that were preferentially influenced by either the alpha-1 or the alpha-2 domain were lost after 4 to 7 wk of culture resulting in CTL cell lines which were extremely sensitive to sequence modifications of HLA-B7 or HLA-B27. The possible reasons for this selection, which we have previously observed with both anti-HLA-A2 and anti-HLA-A3 cell lines and is therefore not unique to HLA-B7 or HLA-B27, are discussed.

Record Date Created: 19891020

7/7/20 (Item 4 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

05834265 88258042 PMID: 2454991

Differential recognition by human cytotoxic T cell clones of human M1 fibroblasts transfected with an HLA-B7 gene (JY150) suggests the existence of two different HLA-B7 alleles in the cell line JY (HLA-A2,2;B7,7;Cw-, -;DR4,w6).

van Seventer G A; Spits H; Yssel H; Melief C J; Ivanyi P  
Central Laboratory, Netherlands Red Cross Blood Transfusion Service,  
Amsterdam.

Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Jul 15  
1988, 141 (2) p417-22, ISSN 0022-1767 Journal Code: 2985117R

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

We have used a panel of human HLA-B7-specific CTL clones to identify an HLA-B7 gene (JY150) transfected into human M1 fibroblasts (M1/B7). Only a subset of the CTL clones recognized the M1/B7 cells, whereas all CTL clones recognized the donor of the B7 gene, the cell line JY (HLA-A2,2;B7,7;Cw-, -;DR4,w6). Analysis of the fine specificity of these CTL clones was performed by testing the reactivity on M1 cells transfected with an HLA-B27K gene and on a panel of cell lines typed for HLA-B7 subtypes (variants). These results, combined with one-dimensional IEF analysis of the M1/B7 cells and the B7 subtypes, indicated that the differential recognition by the CTL clones of the transfected gene was not caused by aberrant expression of the gene itself or due to the absence of critical accessory molecules on the M1 fibroblast cells. Our data suggest that the widely used HLA-B7 reference cell line JY is not homozygous at the HLA-B locus, but contains two different B7 alleles encoding the B7.2 and B7.4 subtypes.

Record Date Created: 19880803

7/7/21 (Item 5 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

05473184 87224047 PMID: 3035018

Reduced allorecognition of adenovirus-2 infected cells.

Andersson M; McMichael A; Peterson P A

Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Jun 1  
1987, 138 (11) p3960-6, ISSN 0022-1767 Journal Code: 2985117R

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

The early region 3 of adenovirus 2 encodes the membrane glycoprotein E19. This protein specifically binds class I transplantation antigens of a variety of species. Concomitant with this interaction the intracellular transport of newly synthesized class I heavy chains is abrogated. At late stages of the virus infection this leads to a notable decrease in the cell surface expression of class I antigens. We have studied how infection with adenovirus 2 influences target cell recognition by alloreactive cytolytic T

lymphocytes. We found that the E19 protein-induced reduction of the HLA-B7 cell surface expression led to a greatly reduced lysis of the infected cells. These findings support our hypothesis that the E19 protein has evolved to facilitate the in vivo replication of the virus by reducing the expression of HLA class I antigens.

Record Date Created: 19870702

7/7/22 (Item 6 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

05151886 86225991 PMID: 3519831

A lymphokine that activates the cytolytic program of both cytotoxic T lymphocyte and natural killer clones.

Milanese C; Siliciano R F; Schmidt R E; Ritz J; Richardson N E; Reinherz E L

Journal of experimental medicine (UNITED STATES) Jun 1 1986, 163

(6) p1583-8, ISSN 0022-1007 Journal Code: 2985109R

Contract/Grant No.: AI19807; AI; NIAID; AI21226; AI; NIAID; CA40134; CA; NCI

Retraction in Reinherz EL. J Exp Med. 1987 Jan 1;165(1) 275; Retraction in PMID 3553413

Document type: Journal Article; Retracted Publication

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

A 10-12 kD lymphokine, herein termed TCAF, was recently shown to be secreted from Th after crosslinking of their antigen/MHC (T3-Ti) receptors. TCAF stimulates resting T lymphocyte proliferation via binding to surface components of the T11 pathway. To determine whether TCAF could induce antigen-independent activation of the lytic machinery of cytotoxic cells, the present studies were conducted. In the presence of TCAF, both T8+ class I MHC-specific and T4+ class II MHC-specific cytotoxic T cell clones were induced to kill targets, including those lacking the appropriate MHC molecules. This effect was unique to TCAF, since IL-1, IL-2, IFN-gamma could not stimulate lytic activity. Furthermore, both T3+T11+ and T3-T11+ NK clones were triggered to lyse NK-resistant target cells. These findings suggest that TCAF can function in an antigen-independent fashion to amplify cytotoxic effector responses.

Record Date Created: 19860709

7/7/23 (Item 7 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

04851834 85235612 PMID: 2409157

Multiple epitopes on human and murine cells expressing HLA-B7 as defined by specific murine cytotoxic T cell clones.

Yannelli J R; Moore L C; Engelhard V H

Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Aug 1985, 135 (2) p900-5, ISSN 0022-1767 Journal Code: 2985117R

Contract/Grant No.: AI20963; AI; NIAID; AI21393; AI; NIAID; CA00835; CA; NCI; +

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Eleven cytotoxic T lymphocyte (CTL) clones were derived from C57BL/6 spleen cells immunized with HLA-B7 expressing human lymphoblastoid cell lines. Reactivity against HLA-B7 was initially established because the clones lysed 2 target cells that shared only HLA-B7 with the immunizing cell line and they did not lyse five other cell lines that were HLA-B7 negative but expressed other class I or class II antigens found on the immunizing cell. Six of the clones were subsequently shown to lyse all

tested HLA-B7-positive B and T lymphoid cell lines, peripheral blood lymphocytes, and a murine L cell that expressed HLA-B7 as a consequence of DNA-mediated gene transfer. On the basis of the inability of the clones to lyse a panel of HLA-B7-negative cell lines, up to 18 other class I antigens could be eliminated as being cross-reactively recognized. However, two of the clones recognized a single HLA-B7-negative cell line. It is suggested that in these cases the clones were cross-reactively recognizing the HLA-B27 or HLA-B40 antigens that were present on these target cells. The remaining five CTL clones failed to lyse one out of seven tested HLA-B7-positive lymphoid lines (either RPMI-1788 or DR1B) and failed to lyse peripheral blood lymphocytes from one out of three tested HLA-B7-positive individuals. These five clones also did not recognize the HLA-B7-positive murine L cell. However, based on analysis with a large target cell panel, the reactivity pattern of these five clones could only be correlated with recognition of HLA-B7. This conclusion is further supported by antibody-blocking studies to be reported elsewhere. As before, lysis of single HLA-B7-negative target cells by two of the clones could be ascribed to recognition of HLA-B27 or HLA-B40. The results show that murine clones raised against HLA-B7 exhibit a high degree of specificity for determinants that are unique or largely confined to the HLA-B7 alloantigen. In addition, these clones define different antigenic determinants on the molecule. Thus, such clones appear to be excellent candidates for use as human tissue typing reagent. The results further show that there is a strong correlation between recognition of particular HLA-B7-positive human cell lines and recognition of the HLA-B7 expressing murine L cell. Possible reasons for such a correlation and their relationship to the general phenomenon of CTL recognition are discussed.

Record Date Created: 19850819

7/7/24 (Item 8 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

04806555 85184044 PMID: 2985705

Construction of novel class I histocompatibility antigens by interspecies exon shuffling.

Engelhard V H; Yannelli J R; Evans G A; Walk S F; Holterman M J  
Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Jun  
1985, 134 (6) p4218-25, ISSN 0022-1767 Journal Code: 2985117R  
Contract/Grant No.: AI20963; AI; NIAID; AI21393; AI; NIAID; CA00835; CA;  
NCI

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Human and mouse class I histocompatibility antigens share considerable structural homology at both the protein and DNA sequence level. This homology has allowed the production of hybrid class I molecules by the reciprocal exchange of DNA sequences corresponding to equivalent domains of HLA-B7 and either H-2Ld or H-2Dd. It is shown that these genes give rise to protein products that are stably expressed on the surface of murine L cells after DNA-mediated gene transfer. These proteins express only those monoclonal antibody-defined H-2 determinants that are expected based on their genetic construction. The molecules have allowed the localization of a number of polymorphic and monomorphic HLA-specific epitopes. In all but one case, expression of an epitope on a domain does not appear to be influenced by the replacement of adjacent human domains with their murine equivalents, suggesting a considerable degree of structural independence of the domains. Cells expressing the hybrid molecules have also been tested as targets for a panel of HLA-B7-specific cytotoxic T cell clones. The results show that the polymorphic determinants recognized by these clones map to the alpha 1 and alpha 2 domains of the HLA-B7 molecule. No evidence for an influence of species-related amino acid sequence differences in the third extracellular domain on T cell recognition was seen. The results are

discussed in light of the proposed domain structure of the class I proteins and the potential use of such molecules for further functional studies.

Record Date Created: 19850620

7/7/25 (Item 9 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

04656957 85031806 PMID: 6436376

Coexpression of the human HLA-A2 or HLA-B7 heavy chain gene and human beta 2-microglobulin gene in L cells.

Bernabeu C; Maziarc R; Spits H; de Vries J; Burakoff S J; Terhorst C  
Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Dec  
1984, 133 (6) p3188-94, ISSN 0022-1767 Journal Code: 2985117R

Contract/Grant No.: AI-15066; AI; NIAID

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

L cells expressing human HLA-A2 or HLA-B7 class I antigen heavy chains are not recognized by human cytotoxic T lymphocytes directed at HLA-A2 or HLA-B7 antigens. To test whether the absence of human beta 2-m was the cause of the lack of recognition by the human cytotoxic T lymphocytes, coexpression of the human beta 2-m gene and the HLA-A2 or HLA-B7 heavy chain in L cells ("double transfectants") was obtained. In addition, L cells expressing HLA-A2 or HLA-B7 antigens in association with human beta 2-m were obtained by an exchange reaction, in which human beta 2-m from serum replaced the endogenous murine beta 2-m. Both types of transfectant cells were used in 51Cr-release assays and cold target inhibition assays for human cytotoxic T cell clones which were directed at HLA-A2 or HLA-B7. Neither human CTL clones nor a mixture of CTL specific for HLA-A2 and HLA-B7 were able to recognize these cells. Several alternative explanations for these observations are discussed.

Record Date Created: 19841219

7/7/26 (Item 10 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

04325761 84009135 PMID: 6352810

Expression of the major histocompatibility antigens HLA-A2 and HLA-B7 by DNA-mediated gene transfer.

Bernabeu C; Finlay D; van de Rijn M; Maziarc R T; Biro P A; Spits H; de Vries J; Terhorst C P

Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Oct  
1983, 131 (4) p2032-7, ISSN 0022-1767 Journal Code: 2985117R

Contract/Grant No.: AI-15066; AI; NIAID

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Genes coding for the heavy chain of the class I antigens HLA-A2 or HLA-B7 of the human major histocompatibility complex have been introduced into mouse Ltk- cells by cotransfection with the herpes simplex virus thymidine kinase gene. HAT-resistant colonies were isolated expressing either HLA-A2 or HLA-B7 as monitored by indirect immunofluorescence. Immunoprecipitation analysis of both antigens by either sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) or isoelectric focusing (IEF) showed that they were identical to the HLA-A2 and HLA-B7 expressed in the human lymphoblastoid cell line JY (homozygous HLA-A2, HLA-B7). However, human cytotoxic T lymphocytes (CTL) generated against JY and CTL clones specific for HLA-A2 or HLA-B7 were unable to recognize the transfectants as targets. These results indicate that the human HLA-A2 (or B7) complexed with the murine beta 2-microglobulin could be an inappropriate target structure for

the CTL. However, because the transfectants are not killed by human CTL even in the presence of lectins, it is suggested that other molecules that are not able to overcome the human-mouse species barrier may be involved in the killing mechanism.

Record Date Created: 19831123

7/7/27 (Item 1 from file: 399)  
DIALOG(R) File 399:CA SEARCH(R)  
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115112275 CA: 115(11)112275t JOURNAL  
Signal transduction via CD4, CD8, and CD28 in mature and immature thymocytes. Implications for thymic selection  
AUTHOR(S): Turka, Laurence A.; Linsley, Peter S.; Paine, Robert, III; Schieven, Gary L.; Thompson, Craig B.; Ledbetter, Jeffrey A.  
LOCATION: Dep. Med., Univ. Michigan, Ann Arbor, MI, 48109, USA  
JOURNAL: J. Immunol. DATE: 1991 VOLUME: 146 NUMBER: 5 PAGES: 1428-36  
CODEN: JOIMA3 ISSN: 0022-1767 LANGUAGE: English  
SECTION:

CA215002 Immunoochemistry

IDENTIFIERS: CD4 antigen thymocyte signal transduction

DESCRIPTORS:

Antigens,CD3...

antigen receptor complex, signal transduction in immature thymocyte via, CD4 and CD8 and CD28 antigens enhancement of, clonal selection in relation to

Receptors,TCR (T-cell antigen receptor)...

CD3 antigen complex, signal transduction in thymocyte via, CD4 and CD8 and CD18 antigens enhancement of, clonal selection in relation to

Antigens,B7/BB-1...

of thymus gland stroma, CD28 antigen role in TCR-mediated signal transduction and clonal deletion in relation to

Thymus gland,thymocyte...

TCR-mediated signal transduction in immature, CD4 and CD8 and CD28 antigens enhancement of, clonal selection in relation to

Antigens,CD28... Antigens,CD4... Antigens,CD8...

TCR-mediated signal transduction in immature thymocyte enhancement by, clonal selection in relation to

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File 410:Chronolog(R) 1981-2002/Jul  
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| \$0.27                                      | Estimated total session cost  0.145 DialUnits |             |

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File 399:CA SEARCH(R) 1967-2002/UD=13705

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Set Items Description

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| 20254   | B7?        |
| 4225535 | T          |
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| 4225535 | T          |
| 1072563 | LYMPHOCYT? |

393022 T(W) LYMPHOCYT?  
S1 4147 (CD28) (20N) (PREVENT? OR INHIBIT? OR BLOCK? OR SUPPRESS?  
OR TREAT? OR THERAP?) (20N) (B7? OR T(W) CELL? OR  
T(W) LYMPHOCYT?)  
? s s1 and py<1992  
Processing  
4147 S1  
30482428 PY<1992  
S2 161 S1 AND PY<1992  
? rd s2  
...examined 50 records (50)  
...examined 50 records (100)  
...examined 50 records (150)  
...completed examining records  
S3 75 RD S2 (unique items)  
? t s3/3/all

3/3/1 (Item 1 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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07890677 BIOSIS NO.: 000092139978  
DIFFERENTIAL REGULATION BY DEXAMETHASONE AND CYCLOSPORINE OF HUMAN T CELLS  
ACTIVATED BY VARIOUS STIMULI  
AUTHOR: FURUE M; ISHIBASHI Y  
AUTHOR ADDRESS: DEP. DERMATOL., UNIV. TOKYO, 7-3-1 HONGO, BUNKYO-KU, TOKYO  
113, JPN.  
JOURNAL: TRANSPLANTATION (BALTIMORE) 52 (3). 1991. 522-526. 1991  
FULL JOURNAL NAME: TRANSPLANTATION (Baltimore)  
CODEN: TRPLA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/2 (Item 2 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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07866434 BIOSIS NO.: 000092125800  
A SYNTHETIC PEPTIDE WITH SEQUENCE IDENTITY TO THE TRANSMEMBRANE PROTEIN  
GP41 OF HIV-1 INHIBITS DISTINCT LYMPHOCYTE ACTIVATION PATHWAYS DEPENDENT  
ON PROTEIN KINASE C AND INTRACELLULAR CALCIUM INFLUX  
AUTHOR: RUEGG C L; STRAND M  
AUTHOR ADDRESS: DEP. PHARMACOLOGY MOLECULAR SCIENCES, JOHNS HOPKINS  
UNIVERSITY SCHOOL MEDICINE, 725 N. WOLFE ST., BIOPHYSICS 311, BALTIMORE,  
MD 21205, USA.  
JOURNAL: CELL IMMUNOL 137 (1). 1991. 1-13. 1991  
FULL JOURNAL NAME: Cellular Immunology  
CODEN: CLIMB  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/3 (Item 3 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
(c) 2002 BIOSIS. All rts. reserv.

07842496 BIOSIS NO.: 000092112662  
CTLA-4 IS A SECOND RECEPTOR FOR THE B CELL ACTIVATION ANTIGEN B7  
AUTHOR: LINSLEY P S; BRADY W; URNES M; GROSMAIRE L S; DAMLE N K; LEDBETTER  
J A  
AUTHOR ADDRESS: ONCOGEN DIVISION, BRISTOL-MYERS SQUIBB RES. INST., 3005  
FIRST AVENUE, SEATTLE, WASHINGTON 98121.  
JOURNAL: J EXP MED 174 (3). 1991. 561-570. 1991

FULL JOURNAL NAME: Journal of Experimental Medicine

CODEN: JEMEA

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

3/3/4 (Item 4 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07842389 BIOSIS NO.: 000092112555  
STRUCTURE EXPRESSION AND T CELL COSTIMULATORY ACTIVITY OF THE MURINE  
HOMOLOGUE OF THE HUMAN B LYMPHOCYTE ACTIVATION ANTIGEN B7  
AUTHOR: FREEMAN G J; GRAY G S; GIMMI C D; LOMBARD D B; ZHOU L-J; WHITE M;  
FINGEROTH J D; GRIBBEN J G; NADLER L M  
AUTHOR ADDRESS: DIVISION TUMOR IMMUNOLOGY, DANA-FARBER CANCER INST., MAYER  
726, 44 BINNEY STREET, BOSTON, MASS. 02115.  
JOURNAL: J EXP MED 174 (3). 1991. 625-632. 1991  
FULL JOURNAL NAME: Journal of Experimental Medicine  
CODEN: JEMEA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/5 (Item 5 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07795496 BIOSIS NO.: 000092088067  
PHENOTYPIC AND FUNCTIONAL CHARACTERISTICS OF ACTIVATED CD8-POSITIVE CELLS A  
CD11B-NEGATIVE-CD2-NEGATIVE SUBSET MEDIATES NONCYTOLYTIC FUNCTIONAL  
SUPPRESSION  
AUTHOR: FREEDMAN M S; RUIJS T C G; BLAIN M; ANTEL J P  
AUTHOR ADDRESS: MONTREAL NEUROLOGICAL INSTITUTE, 3801 UNVERSITY ST.,  
MONTREAL, QUEBEC, CANADA H3A 2B4.  
JOURNAL: CLIN IMMUNOL IMMUNOPATHOL 60 (2). 1991. 254-267. 1991  
FULL JOURNAL NAME: Clinical Immunology and Immunopathology  
CODEN: CLIIA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/6 (Item 6 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07753316 BIOSIS NO.: 000092067037  
INCREASED LYMPHOCYTE BETA-ADRENERGIC RECEPTOR DENSITY IN PROGRESSIVE  
MULTIPLE SCLEROSIS IS SPECIFIC FOR THE CD8 POSITIVE CD28 NEGATIVE  
SUPPRESSOR CELL  
AUTHOR: KARASZEWSKI J W; REDER A T; ANLAR B; KIM W C; ARNASON B G W  
AUTHOR ADDRESS: DEP. NEUROL., UNIV. CHICAGO, 5841 S. MARYLAND AVE., BH BOX  
425, CHICAGO, ILL. 60637.  
JOURNAL: ANN NEUROL 30 (1). 1991. 42-47. 1991  
FULL JOURNAL NAME: Annals of Neurology  
CODEN: ANNED  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/7 (Item 7 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2002 BIOSIS. All rts. reserv.

07751133 BIOSIS NO.: 000092064854  
DISSOCIATION BETWEEN EARLY AND LATE EVENTS IN T CELL ACTIVATION MEDIATED  
THROUGH CD28 SURFACE MOLECULE  
AUTHOR: NUNES J; BAGNASCO M; LOPEZ M; LIPCEY C; MAWAS C; OLIVE D  
AUTHOR ADDRESS: UNITE CANCEROL. ET THERAPEUTIQUE EXP., U.119, INSERM, 27  
BLVD. LEI ROURE, 13009 MARSEILLE, FRANCE.  
JOURNAL: MOL IMMUNOL 28 (4-5). 1991. 427-436. 1991  
FULL JOURNAL NAME: Molecular Immunology  
CODEN: MOIMD  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/8 (Item 8 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2002 BIOSIS. All rts. reserv.

07732176 BIOSIS NO.: 000092056807  
THE EFFECT OF THE CD28 ACTIVATION PATHWAY ON THE IMMUNOSUPPRESSIVE ACTION  
OF CYCLOSPORINE  
AUTHOR: HESS A D; BRIGHT E C  
AUTHOR ADDRESS: 3-127, ONCOLOGY CENTER, JOHNS HOPKINS UNIVERSITY, 600 N.  
WOLFE ST., BALTIMORE, MD. 21205.  
JOURNAL: TRANSPLANTATION (BALTIMORE) 51 (6). 1991. 1232-1240. 1991  
FULL JOURNAL NAME: TRANSPLANTATION (Baltimore)  
CODEN: TRPLA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/9 (Item 9 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2002 BIOSIS. All rts. reserv.

07728679 BIOSIS NO.: 000092053310  
T CELL RECEPTOR-CD3 AND CD28 USE DISTINCT INTRACELLULAR SIGNALING PATHWAYS  
AUTHOR: VAN LIER R A; BROUWER M; DE GROOT E; KRAMER I; AARDEN L A;  
VERHOEVEN A J  
AUTHOR ADDRESS: C/O PUBLICATION SECTETARIAT, CENTRAL LAB., NETHERLANDS RED  
CROSS BLOOD TRANSFUSION SERVICE, P.O. BOX 9406, NL-1006 AK AMSTERDAM,  
NETHERLANDS.  
JOURNAL: EUR J IMMUNOL 21 (7). 1991. 1775-1778. 1991  
FULL JOURNAL NAME: European Journal of Immunology  
CODEN: EJIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/10 (Item 10 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2002 BIOSIS. All rts. reserv.

07685878 BIOSIS NO.: 000092032799  
INHIBITION OF T AND B LYMPHOCYTE PROLIFERATION BY RAPAMYCIN  
AUTHOR: KAY J E; KROMWEL L; DOE S E A; DENYER M  
AUTHOR ADDRESS: SCH. BIOLOGICAL SCI., UNIV. SUSSEX, BRIGHTON BN1 9QG, UK.  
JOURNAL: IMMUNOLOGY 72 (4). 1991. 544-549. 1991  
FULL JOURNAL NAME: Immunology  
CODEN: IMMUA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/11 (Item 11 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)  
(c) 2002 BIOSIS. All rts. reserv.

07678138 BIOSIS NO.: 000092025059  
DIRECT HELPER T CELL-INDUCED B CELL DIFFERENTIATION INVOLVES INTERACTION  
BETWEEN T CELL ANTIGEN CD28 AND B CELL ACTIVATION ANTIGEN B7  
AUTHOR: DAMLE N D; LINSLEY P S; LEDBETTER J A  
AUTHOR ADDRESS: ONCOGEN DIV., BRISTOL-MYERS SQUIBB PHARMACEUTICAL RES.  
INST., 3005 FIRST AVE., SEATTLE, WASH. 98121, USA.  
JOURNAL: EUR J IMMUNOL 21 (5). 1991. 1277-1282. 1991  
FULL JOURNAL NAME: European Journal of Immunology  
CODEN: EJIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/12 (Item 12 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07570505 BIOSIS NO.: 000091111059  
FK-506 AND CYCLOSPORIN A INHIBIT HIGHLY SIMILAR SIGNAL TRANSDUCTION  
PATHWAYS IN HUMAN T LYMPHOCYTES  
AUTHOR: LIN C S; BOLTZ R C; SIEKIERKA J J; SIGAL N H  
AUTHOR ADDRESS: DEP. IMMUNOL. RES., MERCK SHARP DOHME RES. LAB., P.O. BOX  
2000, RAHWAY, N.J. 07065.  
JOURNAL: CELL IMMUNOL 133 (2). 1991. 269-284. 1991  
FULL JOURNAL NAME: Cellular Immunology  
CODEN: CLIMB  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/13 (Item 13 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07570489 BIOSIS NO.: 000091111043  
THE EFFECT OF THE IMMUNOSUPPRESSANT FK-506 ON ALTERNATE PATHWAYS OF T CELL  
ACTIVATION  
AUTHOR: BIERER B E; SCHREIBER S L; BURAKOFF S J  
AUTHOR ADDRESS: ROOM 1610B, DANA-FARBER CANCER INST., 44 BINNEY ST.,  
BOSTON, MASS. 02115, USA.  
JOURNAL: EUR J IMMUNOL 21 (2). 1991. 439-446. 1991  
FULL JOURNAL NAME: European Journal of Immunology  
CODEN: EJIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/14 (Item 14 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07563120 BIOSIS NO.: 000091103674  
IMMOBILIZED ANTI-CD5 TOGETHER WITH PROLONGED ACTIVATION OF PROTEIN KINASE C  
INDUCE INTERLEUKIN 2-DEPENDENT T CELL GROWTH EVIDENCE FOR SIGNAL  
TRANSDUCTION THROUGH CD5  
AUTHOR: VANDENBERGHE P; CEUPPENS J L  
AUTHOR ADDRESS: LAB. CLIN. IMMUNOL., UNIV. HOSP. ST.-RAFAEL, KAPUCIJNENVOER  
33, B-3000 LEUVEN, BELG.  
JOURNAL: EUR J IMMUNOL 21 (2). 1991. 251-260. 1991  
FULL JOURNAL NAME: European Journal of Immunology  
CODEN: EJIMA

RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/15 (Item 15 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07547515 BIOSIS NO.: 000091099593  
EVIDENCE THAT GENISTEIN A PROTEIN-TYROSINE KINASE INHIBITOR INHIBITS CD-28  
MONOCLONAL-ANTIBODY-STIMULATED HUMAN T CELL PROLIFERATION  
AUTHOR: ATLURU S; ATLURU D  
AUTHOR ADDRESS: 701 PARK AVE., R. K. D. P., MINNEAPOLIS, MINN. 55415.  
JOURNAL: TRANSPLANTATION (BALTIMORE) 51 (2). 1991. 448-450. 1991  
FULL JOURNAL NAME: TRANSPLANTATION (Baltimore)  
CODEN: TRPLA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/16 (Item 16 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07544244 BIOSIS NO.: 000091096322  
THE CD28 LIGAND B7-BB1 PROVIDES COSTIMULATORY SIGNAL FOR ALLOACTIVATION OF  
CD4-POSITIVE T CELLS  
AUTHOR: KOULOVA L; CLARK E A; SHU G; DUPONT B  
AUTHOR ADDRESS: IMMUNOGENETICS LAB., BOX 41, MEMORIAL SLOAN-KETTERING  
CANCER CENT., 1275 YORK AVENUE, NEW YORK, N.Y. 10021.  
JOURNAL: J EXP MED 173 (3). 1991. 759-762. 1991  
FULL JOURNAL NAME: Journal of Experimental Medicine  
CODEN: JEMEA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/17 (Item 17 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07544153 BIOSIS NO.: 000091096231  
ACTIVATION OF PERIPHERAL CD8-POSITIVE T LYMPHOCYTES VIA CD28 PLUS CD2  
EVIDENCE FOR IL-2 GENE TRANSCRIPTION MEDIATED BY CD28 ACTIVATION  
AUTHOR: CARABASI M H; DISANTO J P; YANG S Y; DUPONT B  
AUTHOR ADDRESS: MEMORIAL SLOAN KETTERING CANCER CENT., BOX 328, 1275 YORK  
AVE., NEW YORK, N.Y. 10021.  
JOURNAL: TISSUE ANTIGENS 37 (1). 1991. 26-32. 1991  
FULL JOURNAL NAME: Tissue Antigens  
CODEN: TSANA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/18 (Item 18 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07544016 BIOSIS NO.: 000091096094  
BINDING OF THE B CELL ACTIVATION ANTIGEN B7 TO CD28 COSTIMULATES T CELL  
PROLIFERATION AND INTERLEUKIN 2 MESSENGER RNA ACCUMULATION  
AUTHOR: LINSLEY P S; BRADY W; GROSMaire L; ARUFFO A; DAMLE N K; LEDBETTER J  
A  
AUTHOR ADDRESS: ONCOGEN DIV., BRISTOL-MYERS-SQUIBB PHARMACEUTICAL RES.

INST., 3005 FIRST AVENUE, SEATTLE, WASH. 98121.  
JOURNAL: J EXP MED 173 (3). 1991. 721-730. 1991  
FULL JOURNAL NAME: Journal of Experimental Medicine  
CODEN: JEMEA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/19 (Item 19 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07436905 BIOSIS NO.: 000091042894  
CYCLOSPORIN A AND FK-506 IN-VITRO EFFECTS ON PROLIFERATION OF HUMAN T CELLS  
AUTHOR: ATLURU S; WOLOSCHAK G E; MCVEY D S; GUDAPATY S; ATLURU D  
AUTHOR ADDRESS: DEP. ANAT. PHYSIOL., VMS 228, KANS. STATE UNIV., MANHATTAN,  
KANS. 66506, USA.  
JOURNAL: BIOCHEM ARCH 6 (4). 1990. 397-408. 1990  
FULL JOURNAL NAME: Biochemical Archives  
CODEN: BIARE  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/20 (Item 20 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07417939 BIOSIS NO.: 000091023928  
CD28 MOLECULE AS A RECEPTOR-LIKE FUNCTION FOR ACCESSORY SIGNALS IN  
CELL-MEDIATED AUGMENTATION OF IL-2 PRODUCTION  
AUTHOR: KOHNO K; SHIBATA Y; MATSUO Y; MINOWADA J  
AUTHOR ADDRESS: FUJISAKI CELL CENT., HAYASHIBARA BIOCHEM. LAB., INC.,  
675-1, FUJISAKI OKAYAMA, 702 JAPAN OKAYAMA, JPN.  
JOURNAL: CELL IMMUNOL 131 (1). 1990. 1-10. 1990  
FULL JOURNAL NAME: Cellular Immunology  
CODEN: CLIMB  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/21 (Item 21 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07379902 BIOSIS NO.: 000091006582  
SIGNAL REQUIREMENTS FOR ACTIVATION OF LEUKEMIC T CELLS FROM A CHRONIC  
LYMPHOCYTIC LEUKEMIA T-CLL  
AUTHOR: ZOCCHI M R; POGGI A; HELTAI S; VILLA A; INVERARDI L; VICARI A;  
SABBADINI M G; FERRARINI M  
AUTHOR ADDRESS: LABORATORIO IMMUNOTERAPIA ADOTTIVA, INSTITUTO SCIENTIFICO  
SAN RAFFAELE, VIA OLGETTINA 60, 20132 MILAN, ITALY.  
JOURNAL: CLIN EXP IMMUNOL 82 (1). 1990. 108-113. 1990  
FULL JOURNAL NAME: Clinical and Experimental Immunology  
CODEN: CEXIA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/22 (Item 22 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07378256 BIOSIS NO.: 000091004936

STIMULATION OF CLONED HUMAN T LYMPHOCYTES VIA THE CD3 OR CD28 MOLECULES  
INDUCES ENHANCEMENT IN VASCULAR ENDOTHELIAL PERMEABILITY TO  
MACROMOLECULES WITH PARTICIPATION OF TYPE-1 AND TYPE-2 INTERCELLULAR  
ADHESION PATHWAYS

AUTHOR: DAMLE N K; DOYLE L V

AUTHOR ADDRESS: ONCOGEN CORP., 3005 FIRST AVE., SEATTLE, WASH. 98121.

JOURNAL: EUR J IMMUNOL 20 (9). 1990. 1995-2004. 1990

FULL JOURNAL NAME: European Journal of Immunology

CODEN: EJIMA

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

3/3/23 (Item 23 from file: 5)

DIALOG(R) File 5:Biosis Previews(R)

(c) 2002 BIOSIS. All rts. reserv.

07378179 BIOSIS NO.: 000091004859

DELINEATION OF THE MECHANISM OF INHIBITION OF HUMAN T CELL ACTIVATION BY  
PGE-2

AUTHOR: MINAKUCHI R; WACHOLTZ M C; DAVIS L S; LIPSKY P E

AUTHOR ADDRESS: RHEUMATIC DISEASES DIV., HAROLD C. SIMMONS ARTHRITIS RES.  
CENT., UNIV. OF TEXAS SOUTHWESTERN MED. CENT., DALLAS, TEXAS 75235-8884.

JOURNAL: J IMMUNOL 145 (8). 1990. 2616-2625. 1990

FULL JOURNAL NAME: Journal of Immunology

CODEN: JOIMA

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

3/3/24 (Item 24 from file: 5)

DIALOG(R) File 5:Biosis Previews(R)

(c) 2002 BIOSIS. All rts. reserv.

07295839 BIOSIS NO.: 000090075726

T CELL ANTIGEN CD28 MEDIATES ADHESION WITH B CELLS BY INTERACTING WITH  
ACTIVATION ANTIGEN B7-BB-1

AUTHOR: LINSLEY P S; CLARK E A; LEDBETTER J A

AUTHOR ADDRESS: ONCOGEN, 3005 FIRST AVE., WASHINGTON 98121.

JOURNAL: PROC NATL ACAD SCI U S A 87 (13). 1990. 5031-5035. 1990

FULL JOURNAL NAME: Proceedings of the National Academy of Sciences of the  
United States of America

CODEN: PNASA

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

3/3/25 (Item 25 from file: 5)

DIALOG(R) File 5:Biosis Previews(R)

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07295810 BIOSIS NO.: 000090075697

HUMAN SUPPRESSOR T CELL CLONES LACK CD28

AUTHOR: LI S G; OTTENHOFF T H M; VAN DEN ELSEN P; KONING F; ZHANG L; MAK T;  
DE VRIES R R P

AUTHOR ADDRESS: DEP. OF IMMUNOHEMATOL. AND BLOOD BANK, UNIV. HOSP., P.O.  
BOX 9600, NL-2300 RC LEIDEN, NETHERLANDS.

JOURNAL: EUR J IMMUNOL 20 (6). 1990. 1281-1288. 1990

FULL JOURNAL NAME: European Journal of Immunology

CODEN: EJIMA

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

3/3/26 (Item 26 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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07220957 BIOSIS NO.: 000090000811  
CD28 LIGATION IN T-CELL ACTIVATION EVIDENCE FOR TWO SIGNAL TRANSDUCTION  
PATHWAYS  
AUTHOR: LEDBETTER J A; IMBODEN J B; SCHIEVEN G L; GROSMaire L S;  
RABINOVITCH P S; LINDSTEN T; THOMPSON C B; JUNE C H  
AUTHOR ADDRESS: DEP. PATHOL., UNIV. WASHINGTON, SEATTLE, WA.  
JOURNAL: BLOOD 75 (7). 1990. 1531-1539. 1990  
FULL JOURNAL NAME: Blood  
CODEN: BLOOA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/27 (Item 27 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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07159540 BIOSIS NO.: 000089026183  
CARDIAC ALLOGRAFT SURVIVAL ACROSS MAJOR HISTOCOMPATIBILITY COMPLEX BARRIERS  
IN THE RHESUS MONKEY FOLLOWING T LYMPHOCYTE-DEPLETED AUTOLOGOUS MARROW  
TRANSPLANTATION IV. IMMUNE RECONSTITUTION  
AUTHOR: MOSES R D; SHARROW S O; STEPHANY D A; ORR K S; GRESS R E  
AUTHOR ADDRESS: EXP. IMMUNOL. BRANCH, NATL. INST. HEALTH, BUILD. 10, ROOM  
4B17, BETHESDA, MD. 20892.  
JOURNAL: TRANSPLANTATION (BALTIMORE) 48 (5). 1989. 774-781. 1989  
FULL JOURNAL NAME: TRANSPLANTATION (Baltimore)  
CODEN: TRPLA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/28 (Item 28 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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07114449 BIOSIS NO.: 000039051143  
**T-CELL ACTIVATION VIA THE CD28 PATHWAY IS BLOCKED  
BY A SELECTIVE PROTEIN-TYROSINE KINASE INHIBITOR**  
AUTHOR: TREVILLYAN J; LU Y; BJONDAHL J; PHILLIPS C; ATLURU R  
AUTHOR ADDRESS: VET. AFFAIRS MED. CENT., TEX. TECH UNIV. HEALTH SCI. CENT.,  
AMARILLO, TEX. 79106.  
JOURNAL: JOINT MEETING OF THE AMERICAN SOCIETY FOR BIOCHEMISTRY AND  
MOLECULAR BIOLOGY, AND THE AMERICAN ASSOCIATION OF IMMUNOLOGISTS, NEW  
ORLEANS, LOUISIANA, USA, JUNE 4-7, 1990. FASEB (FED AM SOC EXP BIOL) J 4  
(7). 1990. A2200. 1990  
CODEN: FAJOE  
DOCUMENT TYPE: Meeting  
RECORD TYPE: Citation  
LANGUAGE: ENGLISH

3/3/29 (Item 29 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
(c) 2002 BIOSIS. All rts. reserv.

07016270 BIOSIS NO.: 000089108154  
COMPARISON OF THE IMMUNOMODULATION OF PREDNISONE DEXAMETHASONE AND  
DEFLAZACORT ON T-CELL ACTIVATION PATHWAYS AND GAMMA INTERFERON PRODUCTION  
AUTHOR: SCUDELETTI M; CIPRANDI G; PRONZATO C; PASSALACQUA G; IMBIMBO B;  
BAGNASCO M; GANONICA G W

AUTHOR ADDRESS: ALLERGY CENTRE MED. SEMEIOOTICS R, DEP. INTERNAL MED., UNIV. GENOA, GENOA 16131, ITALY.  
JOURNAL: INT J IMMUNOTHER 5 (2). 1989. 85-90. 1989  
FULL JOURNAL NAME: International Journal of Immunotherapy  
CODEN: IJIME  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/30 (Item 30 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07013143 BIOSIS NO.: 000089105027  
IMMUNOREGULATORY PROPERTIES OF T-CELL LINES DERIVED FROM THE SYSTEMIC AND INTRATHECAL COMPARTMENTS A PHENOTYPIC AND FUNCTIONAL STUDY  
AUTHOR: FREEDMAN M S; LOERTSCHER R; CASHMAN N R; DUQUETTE P; BLAIN M; ANTEL J P  
AUTHOR ADDRESS: MONTREAL NEUROL. INST., 3801 UNIVERSITY ST., MONTREAL, QUEBEC, CANADA H3A 2 B4.  
JOURNAL: ANN NEUROL 27 (3). 1990. 258-265. 1990  
FULL JOURNAL NAME: Annals of Neurology  
CODEN: ANNED  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/31 (Item 31 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07013061 BIOSIS NO.: 000089104945  
CD28 IS AN INDUCIBLE T CELL SURFACE ANTIGEN THAT TRANSDUCES A PROLIFERATIVE SIGNAL IN CD3-POSITIVE MATURE THYMOCYTES  
AUTHOR: TURKA L A; LEDBETTER J A; LEE K; JUNE C H; THOMPSON C B  
AUTHOR ADDRESS: MSRB-II, ROOM 1560, 1150 WEST MEDICAL CENTER DR., UNIV. MICH. MED. CENT., ANN ARBOR, MI 48109-0676.  
JOURNAL: J IMMUNOL 144 (5). 1990. 1646-1653. 1990  
FULL JOURNAL NAME: Journal of Immunology  
CODEN: JOIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/32 (Item 32 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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06992637 BIOSIS NO.: 000089093901  
ABNORMAL T SUPPRESSOR CELL FUNCTION IN JUVENILE RHEUMATOID ARTHRITIS  
AUTHOR: SILVERMAN E D; SOMMA C; KHAN M M; MELMON K L; ENGLEMAN E G  
AUTHOR ADDRESS: DIV. IMMUNOLOGY/RHEUMATOLOGY, HOSP. SICK CHILDREN, 555 UNIVERSITY AVENUE, TORONTO, ONTARIO M5G 1X8, CANADA.  
JOURNAL: ARTHRITIS RHEUM 33 (2). 1990. 205-211. 1990  
FULL JOURNAL NAME: Arthritis and Rheumatism  
CODEN: ARHEA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/33 (Item 33 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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06953062 BIOSIS NO.: 000089075067  
T LYMPHOCYTE ACTIVATION THROUGH THE C-28 PATHWAY IS INSENSITIVE TO  
INHIBITION BY THE IMMUNOSUPPRESSIVE DRUG FK-506  
AUTHOR: KAY J E; BENZIE C R  
AUTHOR ADDRESS: BIOCHEM. LAB., SCH. BIOL. SCI., UNIV. SUSSEX, BRIGHTON BN1  
9QG, UK.  
JOURNAL: IMMUNOL LETT 23 (2). 1989. 155-160. 1989  
FULL JOURNAL NAME: Immunology Letters  
CODEN: IMLED  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/34 (Item 34 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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06925938 BIOSIS NO.: 000089059331  
DIFFERENCES IN SURFACE PHENOTYPE AND MECHANISM OF ACTION BETWEEN  
ALLOANTIGEN-SPECIFIC CD8-POSITIVE CYTOTOXIC AND SUPPRESSOR T CELL CLONES  
AUTHOR: KOIDE J; ENGLEMAN E G  
AUTHOR ADDRESS: STANFORD UNIV. MED. CENT., DEP. PATHOL., 800 WELCH RD.,  
PALO ALTO, CALIF. 94304.  
JOURNAL: J IMMUNOL 144 (1). 1990. 32-40. 1990  
FULL JOURNAL NAME: Journal of Immunology  
CODEN: JOIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/35 (Item 35 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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06925892 BIOSIS NO.: 000089059285  
INHIBITION OF FUNCTIONAL PROPERTIES OF TETANUS ANTIGEN-SPECIFIC T-CELL  
CLONES BY ENVELOPE GLYCOPROTEIN GP120 OF HUMAN IMMUNODEFICIENCY VIRUS  
AUTHOR: CHIRMULE N; KALYANARAMAN V S; OYAIZU N; SLADE H B; PAHWA S  
AUTHOR ADDRESS: DEP. PEDIATR., NORTH SHORE UNIV. HOSP., CORNELL UNIV. MED.  
COLL., 300 COMMUNITY DRIVE, MANHASSET, N.Y. 11030.  
JOURNAL: BLOOD 75 (1). 1990. 152-159. 1990  
FULL JOURNAL NAME: Blood  
CODEN: BLOOA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/36 (Item 36 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2002 BIOSIS. All rts. reserv.

06904876 BIOSIS NO.: 000089048948  
T LYMPHOCYTES AND THEIR CD4 SUBSET ARE DIRECT TARGETS FOR THE INHIBITORY  
EFFECT OF CALCITRIOL  
AUTHOR: VANHAM G; CEUPPENS J L; BOUILLON R  
AUTHOR ADDRESS: LEGENDO, ONDERWIJS NAVORSING, GASTHUISBERG, LEUVEN,  
BELGIUM.  
JOURNAL: CELL IMMUNOL 124 (2). 1989. 320-333. 1989  
FULL JOURNAL NAME: Cellular Immunology  
CODEN: CLIMB  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/37 (Item 37 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2002 BIOSIS. All rts. reserv.

06810608 BIOSIS NO.: 000088120051  
STIMULATION VIA THE CD3 AND CD28 MOLECULES INDUCES RESPONSIVENESS TO IL-4  
IN CD4-POSITIVE CD29-POSITIVE CD45R-NEGATIVE MEMORY T LYMPHOCYTES  
AUTHOR: DAMLE N K; DOYLE L V  
AUTHOR ADDRESS: DEP. IMMUNOL., CETUS CORP., 1400 FIFTY-THIRD ST.,  
EMERYVILLE, CALIF. 94608, USA.  
JOURNAL: J IMMUNOL 143 (6). 1989. 1761-1767. 1989  
FULL JOURNAL NAME: Journal of Immunology  
CODEN: JOIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/38 (Item 38 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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06810584 BIOSIS NO.: 000088120027  
DIFFERENTIAL REGULATION OF ACTIVATION-ASSOCIATED RECEPTOR EXPRESSION ON  
CD4-POSITIVE AND CD8-POSITIVE T LYMPHOCYTES BY ALLOSENSITIZED SUPPRESSOR  
T CELLS  
AUTHOR: LOERTSCHER R; STROM T B  
AUTHOR ADDRESS: TRANSPLANT IMMUNOL. LAB., DEP. MED., MCGILL UNIV.,  
MONTREAL, QUEBEC H3A 1A1, CANADA.  
JOURNAL: TRANSPLANTATION (BALTIMORE) 48 (3). 1989. 472-478. 1989  
FULL JOURNAL NAME: TRANSPLANTATION (Baltimore)  
CODEN: TRPLA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/39 (Item 39 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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06756495 BIOSIS NO.: 000088065928  
THE INFLUENCE OF CYCLOSPORIN A ON THE ALTERNATIVE PATHWAYS OF HUMAN T CELL  
ACTIVATION IN-VITRO  
AUTHOR: BLOEMENA E; VAN OERS R H J; WEINREICH S; STILMA-MEINESZ A P;  
SCHELLEKENS P T A; VAN LIER R A W  
AUTHOR ADDRESS: C/O PUBLICATION SECRETARIAT, CENT. LAB. NETH. RED CROSS  
BLOOD TRANSFUSION SERV., P.O. BOX 9406, 1006 AK AMSTERDAM, NETH.  
JOURNAL: EUR J IMMUNOL 19 (5). 1989. 943-946. 1989  
FULL JOURNAL NAME: European Journal of Immunology  
CODEN: EJIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/40 (Item 40 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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06752985 BIOSIS NO.: 000088062416  
HUMAN T CELL ACTIVATION DIFFERENTIAL RESPONSE TO ANTI-CD28 AS COMPARED TO  
ANTI-CD3 MONOCLONAL ANTIBODIES  
AUTHOR: BJORNDAHL J M; SUNG S-S J; HANSEN J A; FU S M  
AUTHOR ADDRESS: DIV. RHEUMATOL., BOX 412, DEP. INTERN. MED., UNIV. VA.,  
SCH. MED., CHARLOTTESVILLE, VA. 22908.  
JOURNAL: EUR J IMMUNOL 19 (5). 1989. 881-888. 1989

FULL JOURNAL NAME: European Journal of Immunology  
CODEN: EJIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/41 (Item 41 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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06752921 BIOSIS NO.: 000088062352  
EVIDENCE FOR THE INVOLVEMENT OF THREE DISTINCT SIGNALS IN THE INDUCTION OF  
IL-2 GENE EXPRESSION IN HUMAN T LYMPHOCYTES  
AUTHOR: JUNE C H; LEDBETTER J A; LINDSTEN T; THOMPSON C B  
AUTHOR ADDRESS: NAVAL MED. RES. INST., MS 44 BETHESDA, MD. 20814-5055.  
JOURNAL: J IMMUNOL 143 (1). 1989. 153-161. 1989  
FULL JOURNAL NAME: Journal of Immunology  
CODEN: JOIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/42 (Item 42 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2002 BIOSIS. All rts. reserv.

06740363 BIOSIS NO.: 000088049793  
HUMAN IMMUNODEFICIENCY VIRUS INFECTION OF HELPER T CELL CLONES EARLY  
PROLIFERATIVE DEFECTS DESPITE INTACT ANTIGEN-SPECIFIC RECOGNITION AND  
INTERLEUKIN 4 SECRETION  
AUTHOR: LAURENCE J; FRIEDMAN S M; CHARTASH E K; CROW M K; POSNETT D N  
AUTHOR ADDRESS: DIV. HEMATOL.-ONCOL., NEW YORK HOSP.-CORNELL MED. CENT.,  
525 EAST 68TH ST., NEW YORK, N.Y. 10021.  
JOURNAL: J CLIN INVEST 83 (6). 1989. 1843-1848. 1989  
FULL JOURNAL NAME: Journal of Clinical Investigation  
CODEN: JCINA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/43 (Item 43 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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06628702 BIOSIS NO.: 000087070864  
SIGNALING THROUGH T LYMPHOCYTE SURFACE PROTEINS TCR-CD3 AND CD28 ACTIVATES  
THE HIV-1 LONG TERMINAL REPEAT  
AUTHOR: TONG-STARKSEN S E; LUCIW P A; PETERLIN B M  
AUTHOR ADDRESS: HHMI, RM. U-426, UCSF, SAN FRANCISCO, CALIF. 94143.  
JOURNAL: J IMMUNOL 142 (2). 1989. 702-707. 1989  
FULL JOURNAL NAME: Journal of Immunology  
CODEN: JOIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/44 (Item 44 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2002 BIOSIS. All rts. reserv.

06595826 BIOSIS NO.: 000087037988  
CLONAL ANALYSIS OF FUNCTIONALLY DISTINCT HUMAN CD4-POSITIVE T CELLS SUBSETS  
AUTHOR: ROTTEVEEL F T M; KOKKELINK I; VAN LIER R A W; KUENEN B; MEAGER A;  
MIEDEMA F; LUCAS C J

AUTHOR ADDRESS: CENT. LAB., NETH. RED CROSS BLOOD TRANSFUSION SERV., P.O.  
BOX 1006 AK AMSTERDAM, NETH.  
JOURNAL: J EXP MED 168 (5). 1988. 1659-1674. 1988  
FULL JOURNAL NAME: Journal of Experimental Medicine  
CODEN: JEMEA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/45 (Item 45 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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06595741 BIOSIS NO.: 000087037903  
CD45 REGULATES SIGNAL TRANSDUCTION AND LYMPHOCYTE ACTIVATION BY SPECIFIC  
ASSOCIATION WITH RECEPTOR MOLECULES ON T OR B CELLS  
AUTHOR: LEDBETTER J A; TONKS N K; FISCHER E H; CLARK E A  
AUTHOR ADDRESS: ONCOGEN CORP., 3005 FIRST AVE., SEATTLE, WASH. 98121.  
JOURNAL: PROC NATL ACAD SCI U S A 85 (22). 1988. 8628-8632. 1988  
FULL JOURNAL NAME: Proceedings of the National Academy of Sciences of the  
United States of America  
CODEN: PNASA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/46 (Item 46 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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06411026 BIOSIS NO.: 000036114179  
LACK OF ACCESSORY MOLECULE CD28 ON MYCOBACTERIUM-LEPRAE INDUCED  
SUPPRESSOR T CELL LINES AND CLONES  
AUTHOR: HAANEN J B A G; SHUGUANG L; V SCHOOTEN W C A; DE VRIES R R P  
AUTHOR ADDRESS: DEP. IMMUNOHEMATOL., BUILD. 1, E3-Q, AZL RIJNSBURGERWEG 10,  
2333 AA LEIDEN, NETH.  
JOURNAL: 4TH INTERNATIONAL CONFERENCE ON HUMAN LEUCOCYTE DIFFERENTIATION  
ANTIGENS, VIENNA, AUSTRIA, FEBRUARY 21-25, 1989. TISSUE ANTIGENS 33 (2).  
1989. 105. 1989  
CODEN: TSANA  
DOCUMENT TYPE: Meeting  
RECORD TYPE: Citation  
LANGUAGE: ENGLISH

3/3/47 (Item 47 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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06268841 BIOSIS NO.: 000086103024  
COOPERATION BETWEEN AN ANTI-T CELL ANTI-CD28 MONOCLONAL ANTIBODY AND  
MONOCYTE-PRODUCED IL-6 IN THE INDUCTION OF T CELL RESPONSIVENESS TO IL-2  
AUTHOR: BAROJA M L; CEUPPENS J L; VAN DAMME J; BILLIAU A  
AUTHOR ADDRESS: LAB. OF CLINICAL IMMUNOL., UNIV. HOSP., CAPUCIJNENVOER 33,  
3000 LEUVEN, BELGIUM.  
JOURNAL: J IMMUNOL 141 (5). 1988. 1502-1507. 1988  
FULL JOURNAL NAME: Journal of Immunology  
CODEN: JOIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/48 (Item 48 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)

(c) 2002 BIOSIS. All rts. reserv.

06224916 BIOSIS NO.: 000086059098  
TRIGGERING CD 28 MOLECULES SYNERGIZE WITH CD 2 T11.1 AND T11.2-MEDIATED T  
CELL ACTIVATION  
AUTHOR: PIERRES A; LOPEZ M; CERDAN C; NUNES J; OLIVE D; MAWAS C  
AUTHOR ADDRESS: INSERM U. 119, 27, BD LEI ROURE, F-13009 MARSEILLE, FR.  
JOURNAL: EUR J IMMUNOL 18 (5). 1988. 685-690. 1988  
FULL JOURNAL NAME: European Journal of Immunology  
CODEN: EJIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/49 (Item 49 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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06214828 BIOSIS NO.: 000086049010  
PHOSPHORYLATION OF T CELL MEMBRANE PROTEINS BY ACTIVATORS OF PROTEIN KINASE  
C  
AUTHOR: CHATILA T A; GEHA R S  
AUTHOR ADDRESS: IMMUNOL. PROGRAM, CHILDREN'S HOSP., 300 LONGWOOD AVE.,  
BOSTON, MASS. 02115.  
JOURNAL: J IMMUNOL 140 (12). 1988. 4308-4314. 1988  
FULL JOURNAL NAME: Journal of Immunology  
CODEN: JOIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/50 (Item 50 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2002 BIOSIS. All rts. reserv.

06203839 BIOSIS NO.: 000086038021  
A NOVEL PATHWAY OF HUMAN T LYMPHOCYTE ACTIVATION IDENTIFICATION BY A  
MONOCLONAL ANTIBODY GENERATED AGAINST A RHEUMATOID SYNOVIAL T CELL LINE  
AUTHOR: HIGGS J B; ZELDES W; KOZARSKY K; SCHTEINGART M; KAN L; BOHLKE P;  
KRIEGER K; DAVIS W; FOX D A  
AUTHOR ADDRESS: UNIV. MICH. MED. CENT., DIV. RHEUMATOL. RACKHAM ARTHRITIS  
RES. UNIT, DEP. INTERN. MED., ANN ARBOR, MI 48109, USA.  
JOURNAL: J IMMUNOL 140 (11). 1988. 3758-3765. 1988  
FULL JOURNAL NAME: Journal of Immunology  
CODEN: JOIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/51 (Item 51 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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06148412 BIOSIS NO.: 000085111564  
DIFFERENTIAL REGULATORY SIGNALS DELIVERED BY ANTIBODY BINDING TO THE CD28  
TP44 MOLECULE DURING THE ACTIVATION OF HUMAN T LYMPHOCYTES  
AUTHOR: DAMLE N K; DOYLE L V; GROSMAIRE L S; LEDBETTER J A  
AUTHOR ADDRESS: CETUS CORPORATION, 1400 FIFTY-THIRD ST., EMERYVILLE, CALIF.  
94608.  
JOURNAL: J IMMUNOL 140 (6). 1988. 1753-1761. 1988  
FULL JOURNAL NAME: Journal of Immunology  
CODEN: JOIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/52 (Item 52 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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06148260 BIOSIS NO.: 000085111412  
SIGNALS INVOLVED IN T CELL ACTIVATION T CELL PROLIFERATION INDUCED THROUGH  
THE SYNERGISTIC ACTION OF ANTI-CD28 AND ANTI-CD2 MONOCLONAL ANTIBODIES  
AUTHOR: VAN LIER R A W; BROUWER M; AARDEN L A  
AUTHOR ADDRESS: C/O PUBLICATION SECRETARIAT, CENTRAL LAB. NETHERLANDS RED  
CROSS BLOOD TRANSFUSION SERV., P.O. BOX 9406, 1006 AK AMSTERDAM,  
NETHERLANDS.  
JOURNAL: EUR J IMMUNOL 18 (1). 1988. 167-172. 1988  
FULL JOURNAL NAME: European Journal of Immunology  
CODEN: EJIMA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/53 (Item 53 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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06074618 BIOSIS NO.: 000085037767  
T-CELL PROLIFERATION INVOLVING THE CD28 PATHWAY IS ASSOCIATED WITH  
CYCLOSPORINE-RESISTANT INTERLEUKIN 2 GENE EXPRESSION  
AUTHOR: JUNE C H; LEDBETTER J A; GILLESPIE M M; LINDSTEN T; THOMPSON C B  
AUTHOR ADDRESS: NAVAL MED. RES. INST., BETHESDA, MD. 20814.  
JOURNAL: MOL CELL BIOL 7 (12). 1987. 4472-4481. 1987  
FULL JOURNAL NAME: Molecular and Cellular Biology  
CODEN: MCEBD  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

3/3/54 (Item 1 from file: 73)  
DIALOG(R)File 73:EMBASE  
(c) 2002 Elsevier Science B.V. All rts. reserv.

04718382 EMBASE No: 1991211736  
Increased lymphocyte beta-adrenergic receptor density in progressive  
multiple sclerosis is specific for the CD8+, CD28- suppressor cell  
Karaszewski J.W.; Reder A.T.; Anlar B.; Woo Chan Kim; Arnason B.G.W.  
Department of Neurology, University of Chicago, BH Box 425, 5841 S.  
Maryland Avenue, Chicago, IL 60637 United States  
Annals of Neurology ( ANN. NEUROL. ) (United States) 1991, 30/1 (42-47)  
CODEN: ANNED ISSN: 0364-5134  
DOCUMENT TYPE: Journal; Article  
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/55 (Item 2 from file: 73)  
DIALOG(R)File 73:EMBASE  
(c) 2002 Elsevier Science B.V. All rts. reserv.

04618099 EMBASE No: 1991112142  
The CD28 ligand B7/BB1 provides costimulatory signal for alloactivation  
of CD4<sup>sup</sup> + T cells  
Koulova L.; Clark E.A.; Shu G.; Dupont B.  
Human Immunogenetics Lab., Memorial Sloan-Kettering, Cancer Center, 1275  
York Avenue, New York, NY 10021 United States  
Journal of Experimental Medicine ( J. EXP. MED. ) (United States) 1991,  
173/3 (759-762)

CODEN: JEMEA ISSN: 0022-1007  
DOCUMENT TYPE: Journal; Article  
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/56 (Item 3 from file: 73)  
DIALOG(R)File 73:EMBASE  
(c) 2002 Elsevier Science B.V. All rts. reserv.

04563499 EMBASE No: 1991057542  
Activation of peripheral CD8<sup>sup</sup> + T lymphocytes via CD28 plus CD2:  
Evidence for IL-2 gene transcription mediated by CD28 activation  
Carabasi M.H.; DiSanto J.P.; Yang S.Y.; Dupont B.  
Sloan Kettering Cancer Center, Box 328, 1275 York Avenue, New York, NY  
10021 United States  
Tissue Antigens ( TISSUE ANTIGENS ) (Denmark) 1991, 37/1 (26-32)  
CODEN: TSANA ISSN: 0001-2815  
DOCUMENT TYPE: Journal; Article  
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/57 (Item 4 from file: 73)  
DIALOG(R)File 73:EMBASE  
(c) 2002 Elsevier Science B.V. All rts. reserv.

04492389 EMBASE No: 1990380498  
Delineation of the mechanism of inhibition of human T cell activation by  
PGEinf 2  
Minakuchi R.; Wacholtz M.C.; Davis L.S.; Lipsky P.E.  
Rheumatic Diseases Division, H.C. Simmons Arth. Res. Center, Univ./Texas  
SW Medical Center, Dallas, TX 75235-8884 United States  
Journal of Immunology ( J. IMMUNOL. ) (United States) 1990, 145/8  
(2616-2625)  
CODEN: JOIMA ISSN: 0022-1767  
DOCUMENT TYPE: Journal; Article  
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/58 (Item 5 from file: 73)  
DIALOG(R)File 73:EMBASE  
(c) 2002 Elsevier Science B.V. All rts. reserv.

04323894 EMBASE No: 1990206450  
Human **suppressor** T cell clones lack CD28  
Il S.G.; Ottenhoff T.H.M.; Van Den Elsen P.; Koning F.; Zhang L.; Mak T.;  
De Vries R.R.P.  
Dept. of Immunohaematology, University Hospital, P.O. Box 9600, NL-2300 RC  
Leiden Netherlands  
European Journal of Immunology ( EUR. J. IMMUNOL. ) (Germany) 1990, 20/6  
(1281-1288)  
CODEN: EJIMA ISSN: 0014-2980  
DOCUMENT TYPE: Journal; Article  
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/59 (Item 6 from file: 73)  
DIALOG(R)File 73:EMBASE  
(c) 2002 Elsevier Science B.V. All rts. reserv.

04211794 EMBASE No: 1990094336  
CD28 is an inducible T cell surface antigen that transduces a  
proliferative signal in CD3<sup>sup</sup> + mature thymocytes  
Turka L.A.; Ledbetter J.A.; Lee K.; June C.H.; Thompson C.B.  
Department of Medicine, University of Michigan, Ann Arbor, MI United

States

Journal of Immunology ( J. IMMUNOL. ) (United States) 1990, 144/5

(1646-1653)

CODEN: JOIMA ISSN: 0022-1767

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/60 (Item 7 from file: 73)

DIALOG(R)File 73:EMBASE

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04140743 EMBASE No: 1990023285

T lymphocyte activation through the C28 pathway is insensitive to inhibition by the immunosuppressive drug FK-506

Kay J.E.; Benzie C.R.

Biochemistry Laboratory, School of Biological Sciences, University of Sussex, Brighton BN1 9QG United Kingdom

Immunology Letters ( IMMUNOL. LETT. ) (Netherlands) 1989, 23/2 (155-160)

CODEN: IMLED ISSN: 0165-2478

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/61 (Item 8 from file: 73)

DIALOG(R)File 73:EMBASE

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04107600 EMBASE No: 1989276646

Antigen-specific suppressor T lymphocytes in man

Damle N.K.; Engleman E.G.

Stanford University School of Medicine, Stanford, CA 94305 United States

Clinical Immunology and Immunopathology ( CLIN. IMMUNOL. IMMUNOPATHOL. )

(United States) 1989, 53/2 II (S17-S24)

CODEN: CLIIA ISSN: 0090-1229

DOCUMENT TYPE: Journal

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/62 (Item 9 from file: 73)

DIALOG(R)File 73:EMBASE

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04072185 EMBASE No: 1989241227

Stimulation via the CD3 and CD28 molecules induces responsiveness to IL-4 in CD4<sup>sup</sup> +CD29<sup>sup</sup> +CD45R<sup>sup</sup> - memory T lymphocytes

Damle N.K.; Doyle L.V.

Department of Immunology, CETUS Corporation, Emeryville, CA 94608 United States

Journal of Immunology ( J. IMMUNOL. ) (United States) 1989, 143/6 (1761-1767)

CODEN: JOIMA ISSN: 0022-1767

DOCUMENT TYPE: Journal

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/63 (Item 10 from file: 73)

DIALOG(R)File 73:EMBASE

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04063680 EMBASE No: 1989232722

I-J and mechanism of immunosuppression

Nakayama T.; Asano Y.; Tada T.

Department of Immunology, Faculty of Medicine, University of Tokyo, Tokyo

Japan  
Immunology ( IMMUNOLOGY ) (United Kingdom) 1989, -/SUPPL. 2 (16-19)  
CODEN: IMMUA ISSN: 0019-2805  
DOCUMENT TYPE: Journal  
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/64 (Item 11 from file: 73)  
DIALOG(R)File 73:EMBASE  
(c) 2002 Elsevier Science B.V. All rts. reserv.

03979898 EMBASE No: 1989148894  
Human immunodeficiency virus infection of helper t celkl clones. Early proliferative defects despite intact antigen-specific recognition and interleukin 4 secretion  
Laurence J.; Friedman S.M.; Chartash E.K.; Crow M.K.; Posnett D.N.  
Laboratory for Acquired Immunodeficiency Syndrome, Virus Research Division of Hematology-Oncology, New York Hospital-Cornell Medical Center, New York, NY 10021 United States  
Journal of Clinical Investigation ( J. CLIN. INVEST. ) (United States) 1989, 83/6 (1843-1848)  
CODEN: JCINA ISSN: 0021-9738  
DOCUMENT TYPE: Journal  
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/65 (Item 12 from file: 73)  
DIALOG(R)File 73:EMBASE  
(c) 2002 Elsevier Science B.V. All rts. reserv.

03854300 EMBASE No: 1989023255  
Clonal analysis of functionally distinct human CD4sup + T cell subsets  
Rotteveel F.T.M.; Kokkelink I.; Van Lier R.A.W.; Kuenen B.; Meager A.; Miedema F.; Lucas C.J.  
Central Laboratory of the Netherlands Red Cross Blood Transfusion Service, University of Amsterdam, 1006 AK Amsterdam Netherlands  
Journal of Experimental Medicine ( J. EXP. MED. ) (United States) 1988, 168/5 (1659-1673)  
CODEN: JEMEA ISSN: 0022-1007  
DOCUMENT TYPE: Journal  
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/66 (Item 1 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)

06987119 91300769 PMID: 1649028  
Phenotypic and functional characteristics of activated CD8+ cells: a CD11b-CD28- subset mediates noncytolytic functional suppression.  
Freedman M S; Ruijs T C; Blain M; Antel J P  
Department of Neurology & Neurosurgery, Montreal Neurological Institute, McGill University, Quebec, Canada.  
Clinical immunology and immunopathology (UNITED STATES) Aug 1991, 60 (2) p254-67, ISSN 0090-1229 Journal Code: 0356637  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: Completed

3/3/67 (Item 2 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)

06977978 91289413 PMID: 1712132

Inhibition of human T-cell activation by FK 506, rapamycin, and cyclosporine A.

Sigal N H; Lin C S; Siekierka J J  
Department of Immunology Research, Merck, Sharp & Dohme Research Laboratories, Rahway, New Jersey.

Transplantation proceedings (UNITED STATES) Apr 1991, 23 (2 Suppl 2) p1-5, ISSN 0041-1345 Journal Code: 0243532

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

3/3/68 (Item 3 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

06805338 91111762 PMID: 1846483

Cyclosporine inhibits T-cell activation at two distinct levels: role of the CD 28 activation pathway.

Hess A D; Bright E C

Bone Marrow Transplant Unit, Johns Hopkins University, Baltimore, Maryland 21205.

Transplantation proceedings (UNITED STATES) Feb 1991, 23 (1 Pt 2) p961-6, ISSN 0041-1345 Journal Code: 0243532

Contract/Grant No.: CA15396; CA; NCI

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

3/3/69 (Item 4 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

06425766 90124324 PMID: 2153452

Enhancement by interleukin 4 of interleukin 2- or antibody-induced proliferation of lymphocytes from interleukin 2-treated cancer patients.

Treisman J; Higuchi C M; Thompson J A; Gillis S; Lindgren C G; Kern D E; Ridell S R; Greenberg P D; Fefer A

Department of Medicine, University of Washington School of Medicine, Seattle 98195.

Cancer research (UNITED STATES) Feb 15 1990, 50 (4) p1160-4, ISSN 0008-5472 Journal Code: 2984705R

Contract/Grant No.: CA 09515; CA; NCI; NO1-CM47668; CM; NCI

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

3/3/70 (Item 5 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

06365666 90062017 PMID: 2479633

I-J as a second T cell receptor for self--molecular polymorphism and the role in suppressive signal transduction.

Tada T; Nakayama T; Asano Y; Kishimoto H; Sano K

Department of Immunology, Faculty of Medicine, University of Tokyo, Japan.

Princess Takamatsu symposia (UNITED STATES) 1988, 19 p227-35, Journal Code: 9301172

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

3/3/71 (Item 6 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

06293373 89381305 PMID: 2570801

Stimulation via the CD3 and CD28 molecules induces responsiveness to IL-4 in CD4+CD29+CD45R- memory T lymphocytes.

Damle N K; Doyle L V

Department of Immunology, CETUS Corporation, Emeryville, CA 94608.

Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Sep 15 1989, 143 (6) p1761-7, ISSN 0022-1767 Journal Code: 2985117R

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

3/3/72 (Item 7 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

06288192 89374534 PMID: 2550020

Two distinct mechanisms of interleukin-2 gene expression in human T lymphocytes.

June C H; Jackson K M; Ledbetter J A; Leiden J M; Lindsten T; Thompson C B

Naval Medical Research Institute, Bethesda, MD 20814.

Journal of autoimmunity (ENGLAND) Jun 1989, 2 Suppl p55-65, ISSN 0896-8411 Journal Code: 8812164

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

3/3/73 (Item 8 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

06215986 89313341 PMID: 3075679

Comparative aspects of T cell activation in vivo following stimulation with anti-CD3 MAB, allogeneic cells and Trypanosoma cruzi.

Pereira G M; Furtado G de C; Yokoyama W M; Kipnis T L; Shevach E M  
Cellular Immunology Section, LI-NIAID, Bethesda, MD.

Memorias do Instituto Oswaldo Cruz (BRAZIL) Nov 1988, 83 Suppl 1 p284-90, ISSN 0074-0276 Journal Code: 7502619

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

3/3/74 (Item 9 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

05928984 89010540 PMID: 3049912

A novel activation pathway for mature thymocytes. Costimulation of CD2 (T,p50) and CD28 (T,p44) induces autocrine interleukin 2/interleukin 2 receptor-mediated cell proliferation.

Yang S Y; Denning S M; Mizuno S; Dupont B; Haynes B F

Laboratories of Human and Biochemical Immunogenetics, Sloan-Kettering Institute for Cancer Research, New York, New York 10021.

Journal of experimental medicine (UNITED STATES) Oct 1 1988, 168 (4) p1457-68, ISSN 0022-1007 Journal Code: 2985109R

Contract/Grant No.: CA-22507; CA; NCI; CA-28936; CA; NCI; PO30 CA-08748;  
CA; NCI; +  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: Completed

3/3/75 (Item 1 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
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113224572 CA: 113(25)224572c PATENT  
Immunotherapy involving CD28 stimulation of T-cell lymphokines  
INVENTOR(AUTHOR): Thompson, Craig B.; June, Carl H.; Ledbetter, Jeffrey  
A.; Lindsten, Tullia  
LOCATION: USA  
ASSIGNEE: University of Michigan; Bristol-Myers Squibb Co.  
PATENT: PCT International ; WO 9005541 A1 DATE: 900531  
APPLICATION: WO 89US5304 (891122) \*US 275433 (881123)  
PAGES: 32 pp. CODEN: PIXXD2 LANGUAGE: English CLASS: A61K-039/395A  
DESIGNATED COUNTRIES: JP DESIGNATED REGIONAL: AT; BE; CH; DE; ES; FR; GB  
; IT; LU; NL; SE  
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3/7/72 (Item 7 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

06288192 89374534 PMID: 2550020

Two distinct mechanisms of interleukin-2 gene expression in human T lymphocytes.

June C H; Jackson K M; Ledbetter J A; Leiden J M; Lindsten T; Thompson C B

Naval Medical Research Institute, Bethesda, MD 20814.

Journal of autoimmunity (ENGLAND) Jun 1989, 2 Suppl p55-65,

ISSN 0896-8411 Journal Code: 8812164

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Interleukin-2 (IL-2) gene regulation was investigated in primary cultures of highly purified human peripheral blood CD28+ T cells. Two discrete mechanisms for induction of T-cell proliferation could be distinguished by examining cell cycle progression and the expression of the IL-2 gene. Stimulation of cells by CD3 MoAb induced only transiently expressed, small amounts of IL-2 mRNA that was completely suppressed by cyclosporine.

Costimulation of T cells with CD3 MoAb and either CD28 MoAb or PMA, but not calcium ionophore, induced a 50-100-fold increased in IL-2 gene expression and secretion. High levels of IL-2 gene expression could also be achieved by stimulation with calcium ionophore and PMA or CD28 MoAb and PMA, but not by CD28 MoAb plus calcium ionophore. IL-2 gene expression and T-cell proliferation induced by CD3 MoAb plus PMA or calcium ionophore plus PMA were completely suppressible by cyclosporine. In contrast, IL-2 gene expression and T-cell proliferation induced by CD28 MoAb plus PMA were unaffected by cyclosporine. The CD28 signal was dependent on new protein synthesis. Nuclear run-on transcription assays showed that anti-CD28 did not affect lymphokine transcription.

A major effect of CD28 stimulation on mRNA stability was shown by studies using actinomycin D; CD28 stimulation substantially increased the half-life of IL-2 and TNF-alpha mRNA. The effects of anti-CD28 stimulation were specific for growth factors, and thus differ from previously described effects of cycloheximide on mRNA stability. These studies suggest the existence of two biochemical pathways for the induction of IL-2 production, one that occurs at the transcriptional level and is mediated by intracellular calcium release and protein kinase C and is cyclosporine-sensitive, and one that acts post-transcriptionally, is mediated by CD28 stimulation, and is cyclosporine-resistant.

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3/7/73 (Item 8 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)

06215986 89313341 PMID: 3075679

Comparative aspects of T cell activation in vivo following stimulation with anti-CD3 MAB, allogeneic cells and Trypanosoma cruzi.

Pereira G M; Furtado G de C; Yokoyama W M; Kipnis T L; Shevach E M  
Cellular Immunology Section, LI-NIAID, Bethesda, MD.

Memorias do Instituto Oswaldo Cruz (BRAZIL) Nov 1988, 83 Suppl 1  
p284-90, ISSN 0074-0276 Journal Code: 7502619

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

The in vivo administration of the immunosuppressive drug, Cyclosporin A (CSA), has allowed us to define IL-2 dependent and IL-2 independent pathways of T cell activation in vivo. Thus, CSA inhibited T cell

activation and the production of IL-2 mRNA in the draining lymph node (LN) population following footpad injection of anti-CD3 mAb. In contrast, even though CSA completely inhibited the induction of IL-2 mRNA in the draining LN following the injection of allogeneic cells, T cell activation proceeded normally. In the present study, we have analyzed the effects of CSA on the T cell activation induced *in vivo* by *T. cruzi*. BALB/c and C57BL/6 mice were injected subcutaneously in the footpad with irradiated, cultured *T. cruzi* trypomastigotes (CMTs, clone sylvio-X10/4). CSA was delivered to the mice via an osmotic pump, Alzet 2001 at a concentration of 35mg/Kg/day. The injection of CMTs resulted in a dose dependent activation of the draining LN population including an increase in the number of cells, an increase in cell size, induction of expression of the IL-2 receptor and other T cell activation antigens (Ly-6, CD28), induction of responsiveness to IL-2, and a vigorous proliferative response when the freshly explanted node was cultured for 18 h *in vitro* in the presence of 3H-TdR. CSA markedly inhibited all of these parameters of T cell activation. Thus, the early T cell activation response observed after injection of irradiated *T. cruzi* CMTs appears to be mediated by an IL-2 dependent, CSA sensitive T cell activation pathway.

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